BUICK

# Century

# The 1995 Buick Century Owner's Manual


**How to Use this Manual** ..... viii
This section tells you how to use your manual and includes safety and vehicle damage warnings and symbols.

**Seats and Restraint Systems** ..... 1-1
This section tells you how to use your seats and safety belts properly. It also explains the "SRS" system.

**Features and Controls** ..... 2-1
This section explains how to start and operate your Buick.

**Comfort Controls and Audio Systems** ..... 3-1
This section tells you how to adjust the ventilation and comfort controls and how to operate your sound system.

**Your Driving and the Road** ..... 4-1
Here you'll find helpful information and tips about the road and how to drive under different conditions.

**Problems on the Road** ..... 5-1
This section tells you what to do if you have a problem while driving, such as a flat tire or engine overheating, etc.

**Service and Appearance Care** ..... 6-1
Here the manual tells you how to keep your Buick running properly and looking good.

**Maintenance Schedule** ..... 7-1
This section tells you when to perform vehicle maintenance and what fluids and lubricants to use.

**Customer Assistance Information** ..... 8-1
This section tells you how to contact Buick for assistance and how to get service publications. It also gives you information on "Reporting Safety Defects" on page 8-4.

**Index** ..... 9-1
Here's an alphabetical listing of almost every subject in this manual. You can use it to quickly find something you want to read.

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This manual includes the latest information at the time it was printed. We reserve the right to make changes in the product after that time without further notice. For vehicles first sold in Canada, substitute the name "General Motors of Canada Limited" for Buick Motor Division whenever it appears in this manual.

Please keep this manual in your Buick, so it will be there if you ever need it when you're on the road. If you sell the vehicle, please leave this manual in it so the new owner can use it.

We support voluntary technician certification.

## For Canadian Owners Who Prefer a French Language Manual:

Aux proprietaires canadiens: Vous pouvez vous procurer un exemplaire de ce guide en francais chez votre concessionaire ou au DGN Marketing Services Ltd., 1500 Bonhill Rd., Mississauga, Ontario L5T 1C7.

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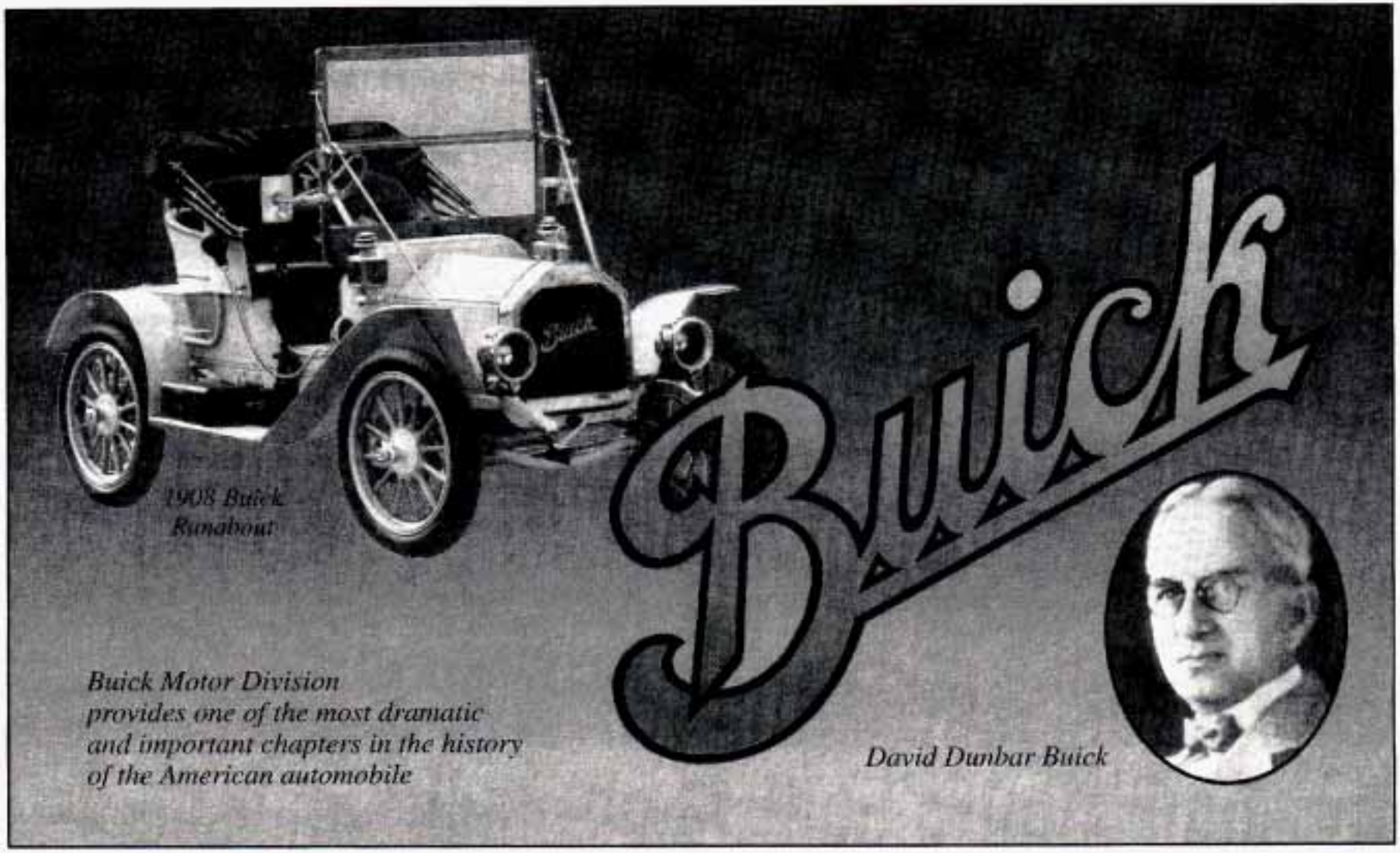

Buick
1908 Buick
Runabout
Buick Motor Division
provides one of the most dramatic
and important chapters in the history
of the American automobile
David Dunbar Buick

*Walter Marr and Thomas Buick*

Buick's chief engineer, Walter L. Marr (left), and Thomas D. Buick, son of founder David Dunbar Buick, drove the first Flint Buick in a successful Flint-Detroit round trip in July 1904.

David Buick was building gasoline engines by 1899, and Marr, his engineer, apparently built the first auto to be called a Buick in 1900. However, Buick traditionally dates its beginnings to 1903. That was the year the company was reorganized, refinanced and moved from Detroit to Flint. Buick has always been a product innovator. Buick engineers developed the "valve-in-head" engine, a light, powerful and reliable engine which would eventually influence the entire automotive industry.

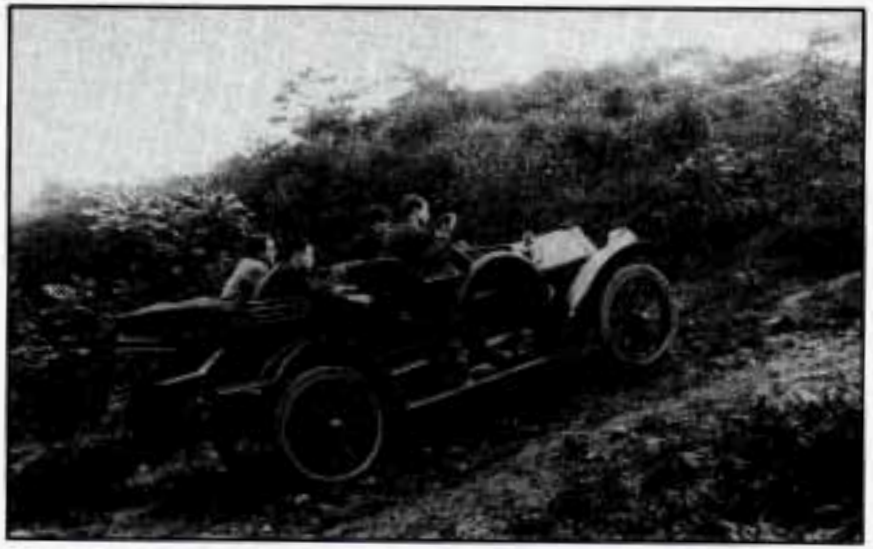
William C. Durant was instrumental in promoting Buicks across the country using his Durant-Dort Carriage Co. outlets and salespeople as the nucleus of a giant distribution system. He knew the Buick as a "self-seller". If automobiles could be this good, he thought, maybe it was time to switch from the horse and buggy business to automobiles.

*William C. (Billy) Durant*

At the 1905, New York Auto Show, Durant took orders for 1,000 Buicks before the company had built 40. On Buick's success, Durant created a holding company, September 16, 1908. He called it General Motors.

Durant also created a racing team that won 500 racing trophies in 1909 and 1910, including successes at Indianapolis two years before the Indy 500 began.

The success of Buick engines was visible not only on the race track, but in endurance tests across the country and around the world. Buick was the only car to complete a 1,000-mile Chicago-to-New York race in 1906. And a Buick was the first car to travel across South America, driven from Buenos Aires, Argentina, over the Andes to Santiago, Chile in 1914.



*1911 Model 21 Touring Car on Buick's Test Hill*

Buick drew plenty of attention because it could climb hills and run through mud like no other car. Buick's endurance and reliability were world famous.

During World War I, Buick built Liberty aircraft engines as well as Red Cross ambulances so successful that one Buick ambulance was awarded the Croix de Guerre by the French government.

As a builder of premier automobiles, Buick was hard hit by the Great Depression. However, new General Manager, Harlow H. Curtice created popular new models including the Special and the Roadmaster. Buick sales soon flourished.

*First Buick Factory*

In World War II, Buick built aircraft engines, tanks and other military hardware. This post-war period brought great styling and engineering changes which resulted in increased sales. The torque converter automatic transmission, Dynaflow, was introduced in the 1948 Roadmaster. Buick's famous "portholes" came along in 1949.

*1949 Roadmaster*

A high-compression V-8 engine was introduced in 1953. And Buick's famous vertical pillar "toothy" grille, (introduced in 1942), became more massive in the post-war era.

*1953 Skylark*

Motor Trend magazine named the 1962 Buick Special, "Car of the Year". The first production V-6 engine was used in the Special.

*1962 Buick Special*

Built inside the walls of the old buildings in Buick's former Flint complex, which formed the cornerstone of General Motors Buick City, is a state-of-the-art assembly facility with more than 200 robots and other high-tech equipment. It was completed in the fall of 1985.

Buicks are, and will continue to be, premium American motorcars with smooth power, high performance, rich detail and comfortable accommodation.

*Ed Mertz, General Manager, Buick Motor Division*

Our mission is simple:

"Buick will provide Premium American Motorcars backed with services that exceed our customers' expectations, throughout the purchase, ownership, service and repurchase experience."

Buicks are SUBSTANTIAL.

Buicks are DISTINCTIVE.

Buicks are POWERFUL.

Buicks are MATURE.

## How to Use This Manual

Many people read their owner's manual from beginning to end when they first receive their new vehicle. This will help you learn about the features and controls for your vehicle. In this manual, you'll find that pictures and words work together to explain things quickly.

## Index

A good place to look for what you need is the Index in the back of the manual. It's an alphabetical list of all that's in the manual, and the page number where you'll find it.

## Safety Warnings and Symbols

You will find a number of safety cautions in this book. We use a box with gray background and the word CAUTION to tell you about things that could hurt you if you were to ignore the warning.

**⚠ CAUTION:**

**These mean there is something that could hurt you or other people.**

In the gray caution area, we tell you what the hazard is. Then we tell you what to do to help avoid or reduce the hazard. Please read these cautions. If you don't, you or others could be hurt.

You will also find a circle with a slash through it in this book.

This safety symbol means "Don't," "Don't do this," or "Don't let this happen."

## Vehicle Damage Warnings

Also, in this book you will find these notices:

**NOTICE:**

**These mean there is something that could damage your vehicle.**

In the notice area, we tell you about something that can damage your vehicle. Many times, this damage would not be covered by your warranty, and it could be costly. But the notice will tell you what to do to help avoid the damage.

When you read other manuals, you might see CAUTION and NOTICE warnings in different colors or in different words.

You'll also see warning labels on your vehicle. They use yellow for cautions, blue for notices and the words CAUTION or NOTICE.

## Vehicle Symbols

These are some of the symbols you may find on your vehicle.

For example, these symbols are used on an original battery:

CAUTION POSSIBLE INJURY

PROTECT EYES BY SHIELDING

CAUSTIC BATTERY ACID COULD CAUSE BURNS

AVOID SPARKS OR FLAMES

SPARK OR FLAME COULD EXPLODE BATTERY

These symbols are important for you and your passengers whenever your vehicle is driven:

DOOR LOCK UNLOCK

FASTEN SEAT BELTS

POWER WINDOW

AIR BAG

These symbols have to do with your lights:

MASTER LIGHTING SWITCH

TURN SIGNALS

PARKING LIGHTS

HAZARD WARNING FLASHER

LIGHTS OR HIGH BEAM

FOG LAMPS

These symbols are on some of your controls:

WINDSHIELD WIPER

WINDSHIELD WASHER

WINDSHIELD DEFROSTER

REAR WINDOW DEFOGGER

VENTILATING FAN

These symbols are used on warning and indicator lights:

ENGINE COOLANT TEMP

BATTERY CHARGING SYSTEM

BRAKE

RADIATOR COOLANT

FUEL

ENGINE OIL PRESSURE

ENGINE OIL TEMP

ANTI-LOCK BRAKE

Here are some other symbols you may see:

FUSE

HOOD RELEASE

RADIO VOLUME

AIR CONDITIONING

TRUNK RELEASE

LIGHTER

HORN

SPEAKER

# Section 1 Seats and Restraint Systems

Here you'll find information about the seats in your Buick and how to use your safety belts properly. You can also learn about some things you should *not* do with air bags and safety belts.

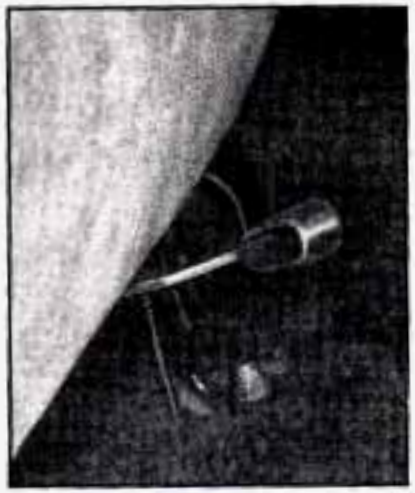
## Seats and Seat Controls

This section tells you about the seats -- how to adjust them, and also about folding seats, reclining front seatbacks, and head restraints.

### Manual Seat

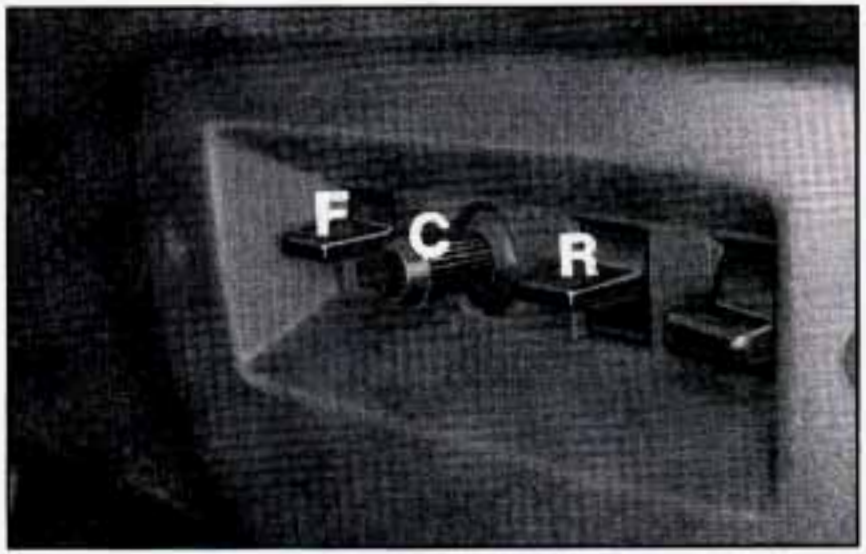
**⚠ CAUTION:**

**You can lose control of the vehicle if you try to adjust a manual driver's seat while the vehicle is moving. The sudden movement could startle and confuse you, or make you push a pedal when you don't want to. Adjust the driver's seat only when the vehicle is not moving.**



Move the lever under the front seat to the left to unlock it. Slide the seat to where you want it then release the lever to lock. Try to move the seat with your body, to make sure the seat is locked into place.

## Power Seat (Option)




The power seat controls are located on the front of the seat. To adjust the power seat:

**Front Control (F):** Raise the front of the seat by holding the switch up. Hold the switch down to lower the front of the seat.

**Center Control (C):** Move the seat forward or back by holding the control to the right or left. Raise or lower the seat by holding the control up or down.

**Rear Control (R):** Raise the rear of the seat by holding the switch up. Hold the switch down to lower the rear of the seat.

## Reclining Front Seatbacks

The switch is located on the front of the seat. To recline the seatback hold the switch up. Hold the switch down to raise the seatback.

But don't have a seatback reclined if your vehicle is moving.

**⚠ CAUTION:**

**Sitting in a reclined position when your vehicle is in motion can be dangerous. Even if you buckle up, your safety belts can't do their job when you're reclined like this.**

**CAUTION: (Continued)**

**CAUTION: (Continued)**

**The shoulder belt can't do its job because it won't be against your body. Instead, it will be in front of you. In a crash you could go into it, receiving neck or other injuries.**

**The lap belt can't do its job either. In a crash the belt could go up over your abdomen. The belt forces would be there, not at your pelvic bones. This could cause serious internal injuries.**

**For proper protection when the vehicle is in motion, have the seatback upright. Then sit well back in the seat and wear your safety belt properly.**

## Head Restraints

Head restraints are fixed on some models and adjustable on others. Slide an adjustable head restraint up or down so that the top of the restraint is closest to the top of your ears. This position reduces the chance of a neck injury in a crash.

## Folding Rear Seats (Wagon)

To add more cargo room, the seatback of your rear second and optional rear-facing third seats can be easily folded down. Be sure to check your seatback latches now

and then by pushing the seatback back and forth. If they do not latch properly, have them checked by your dealer.

Remember to keep safety belts clear of seat hinges and latches so they are not damaged when you raise and lower the seatbacks.

## Folding Second Seat

To lower the split second seatback:

Each seat has its own release button. Hold the release button down and pull the seatback forward and down.

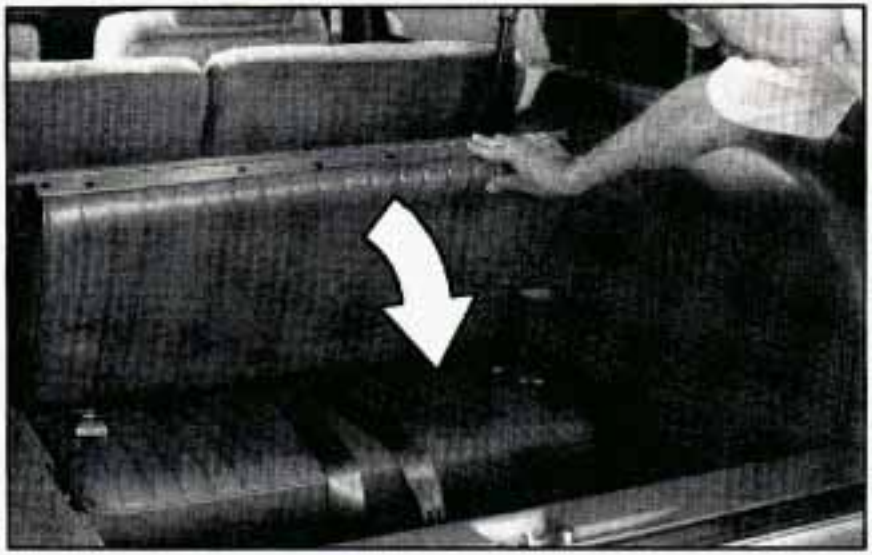
To raise the split second seatback:

Lift the seatback until it locks in the upright position. Push back and forth on the seatback to be sure it is locked in place.

## Folding Third Seat (Option)

To lower the rear-facing third seatback:

1. Open the liftgate and lift the seat release lever located at the lower corner of the storage compartment on the passenger side.



2. Pull the seatback toward the rear of the vehicle, then push it down to the locked position.

3. Lower the storage compartment lid.

To raise the rear-facing third seatback:

If your vehicle is equipped with a roll-up cargo cover, it must be removed before raising the seatback.

1. Open the liftgate and lift the storage compartment lid.
2. Fold it forward against the seatback.
3. Press down on the seat release levers (one on each side of the seat), and allow the seatback to pop up.

**⚠ CAUTION:**

**Don't let anyone ride where he or she can't wear a safety belt properly. If you are in a crash and you're not wearing a safety belt, your injuries can be much worse. You can hit things inside the vehicle or be ejected from it. You can be seriously injured or killed. In the same crash, you might not be if you are buckled up. Always fasten your safety belt, and check that your passengers' belts are fastened properly too.**

4. Push the seatback all the way up until it locks in the upright position. Push back and forth on the seatback to be sure it is locked in place.

## Safety Belts: They're for Everyone

This part of the manual tells you how to use safety belts properly. It also tells you some things you should not do with safety belts.

And it explains the Supplemental Restraint System, or "air bag" system.

Your car has a light that comes on as a reminder to buckle up. (See "Safety Belt Warning Light" in the Index.)

In many states and Canadian provinces, the law says to wear safety belts. Here's why: *They work.*

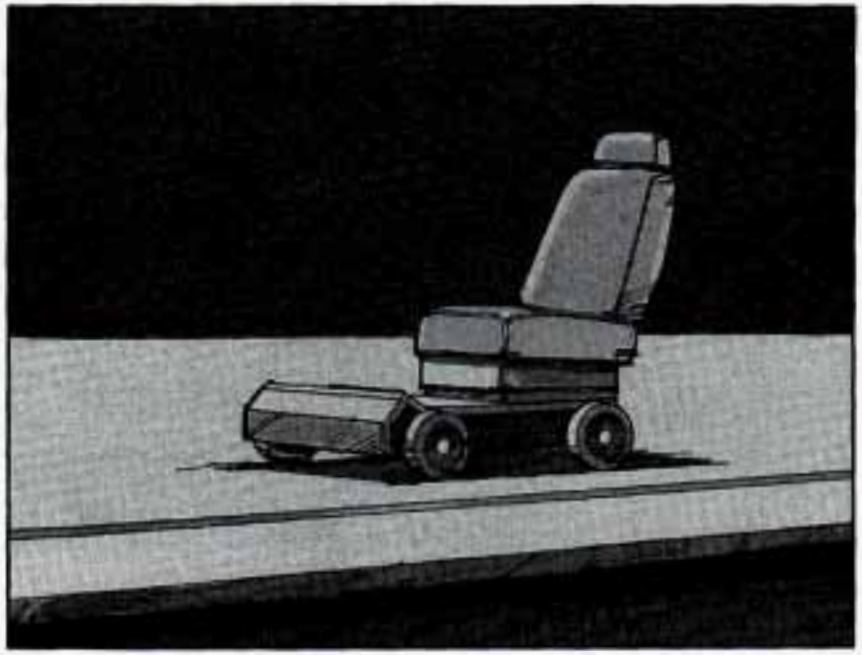
You never know if you'll be in a crash. If you do have a crash, you don't know if it will be a bad one.

A few crashes are mild, and some crashes can be so serious that even buckled up a person wouldn't survive. But most crashes are in between. In many of them, people who buckle up can survive and sometimes walk away. Without belts they could have been badly hurt or killed.

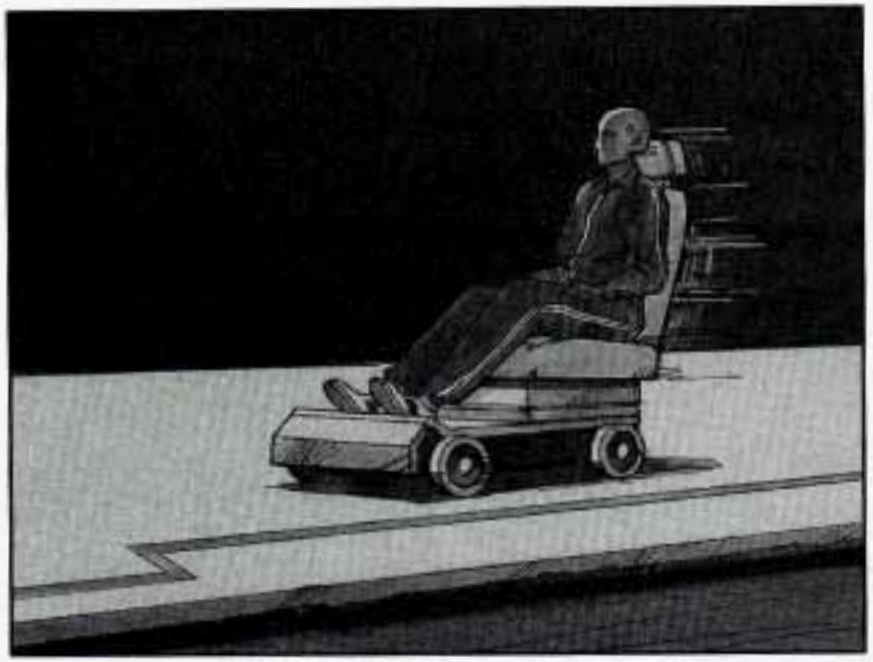
After more than 25 years of safety belts in vehicles, the facts are clear. In most crashes buckling up does matter ... a lot!

## Why Safety Belts Work

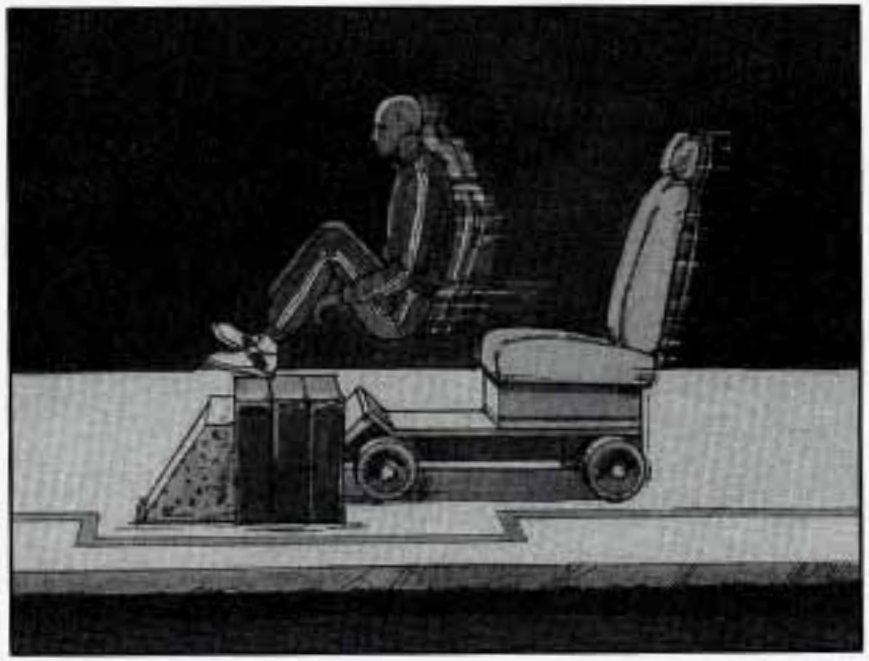
When you ride in or on anything, you go as fast as it goes.



Take the simplest vehicle. Suppose it's just a seat on wheels.



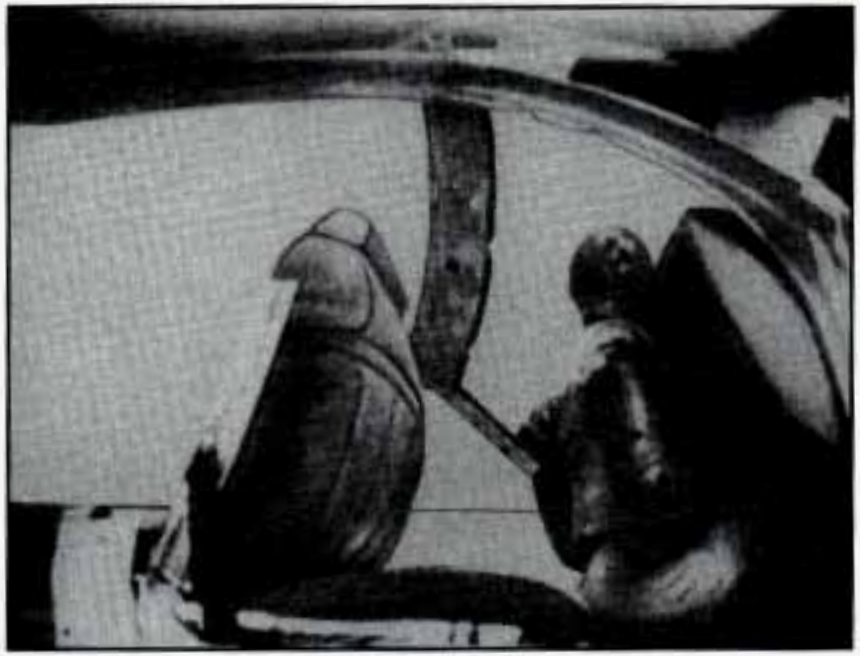
Put someone on it.



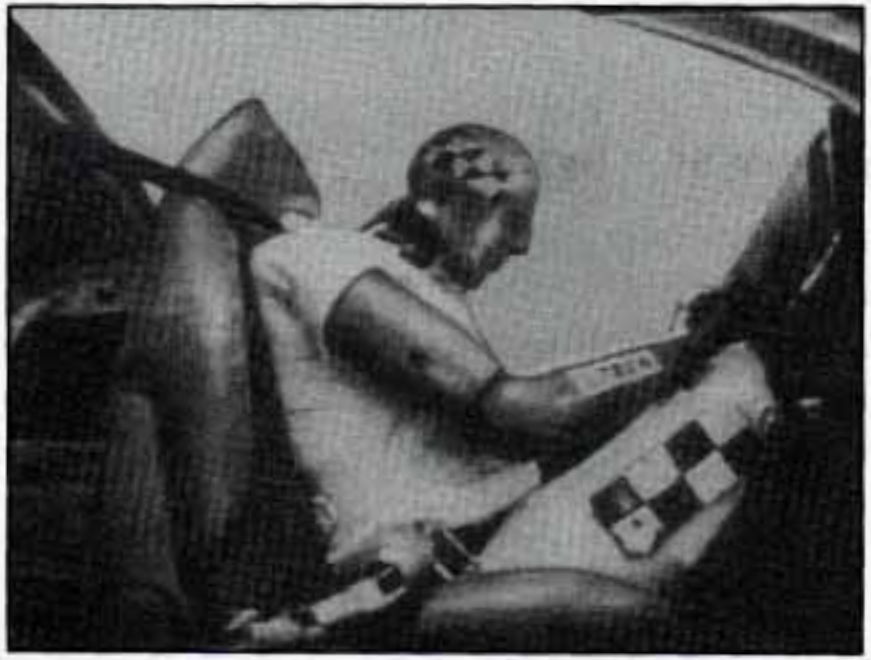
Get it up to speed. Then stop the vehicle. The rider doesn't stop.

The person keeps going until stopped by something.

In a real vehicle, it could be the windshield ...



or the instrument panel ...



or the safety belts!

With safety belts, you slow down as the vehicle does. You get more time to stop. You stop over more distance, and your strongest bones take the forces. That's why safety belts make such good sense.

## Here Are Questions Many People Ask About Safety Belts -- and the Answers

**Q: Won't I be trapped in the vehicle after an accident if I'm wearing a safety belt?**

**A:** You *could* be -- whether you're wearing a safety belt or not. But you can unbuckle a safety belt, even if you're upside down. And your chance of being conscious during and after an accident, so you *can* unbuckle and get out, is *much* greater if you are belted.

**Q: Why don't they just put in air bags so people won't have to wear safety belts?**

**A:** Air bags are in many vehicles today and will be in more of them in the future. But they are supplemental systems only; so they work *with* safety belts -- not instead of them. Every air bag system ever offered for sale has required the use of safety belts. Even if you're in a vehicle that has air bags, you still have to buckle up to get the most protection. That's true not only in frontal collisions, but especially in side and other collisions.

**Q: If I'm a good driver, and I never drive far from home, why should I wear safety belts?**

**A:** You may be an excellent driver, but if you're in an accident -- even one that isn't your fault -- you and your passengers can be hurt. Being a good driver doesn't protect you from things beyond your control, such as bad drivers.

Most accidents occur within 25 miles (40 km) of home. And the greatest number of serious injuries and deaths occur at speeds of less than 40 mph (65 km/h).

Safety belts are for everyone.

# How to Wear Safety Belts Properly

## Adults

This part is only for people of adult size.

Be aware that there are special things to know about safety belts and children. And there are different rules for smaller children and babies. If a child will be riding in your Buick, see the part of this manual called "Children." Follow those rules for everyone's protection.

First, you'll want to know which restraint systems your vehicle has.

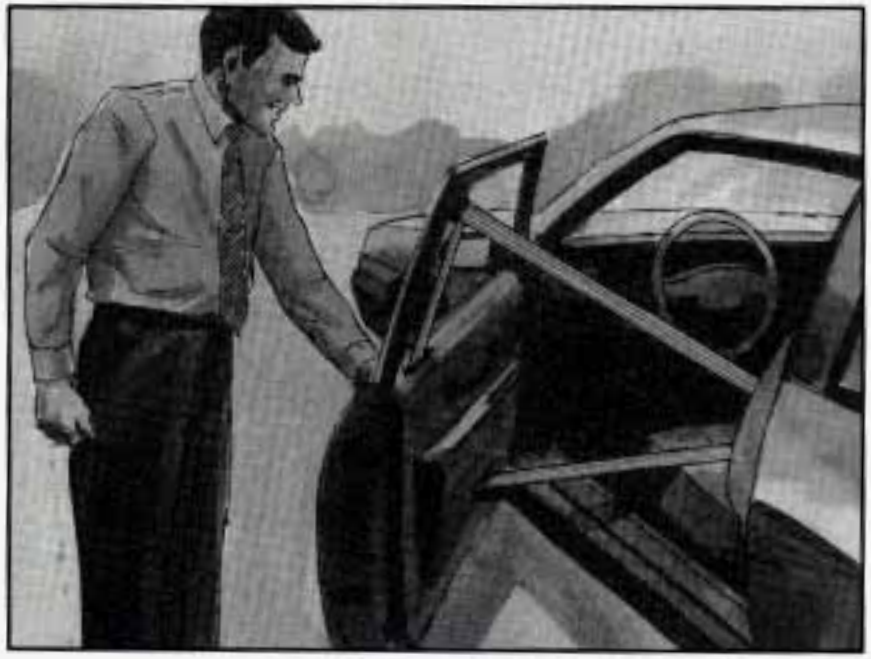
We'll start with the driver position.

# Driver Position

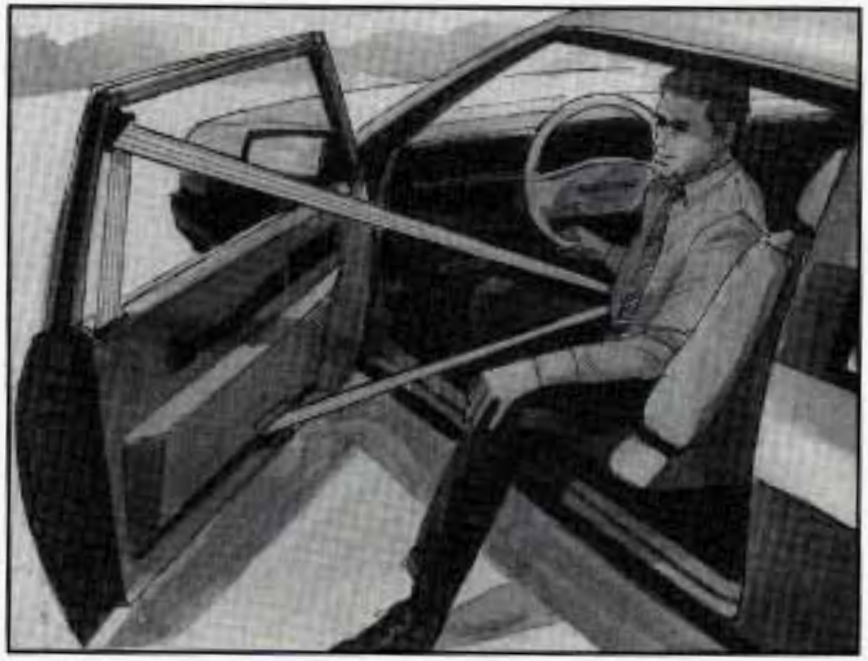
This part describes the driver's restraint system.

Was your Buick first sold, when new, in Canada? (If it was, a sticker on the driver's door will say "conforms to all applicable Canada motor vehicle . . . " etc.) If so, then this "Driver Position" part doesn't apply to your vehicle. To learn how to use your driver position safety belts, read the *Canadian Owner's Manual Safety Belt Supplement*. It comes with every new Buick first sold in Canada.

## Automatic Lap-Shoulder Belt

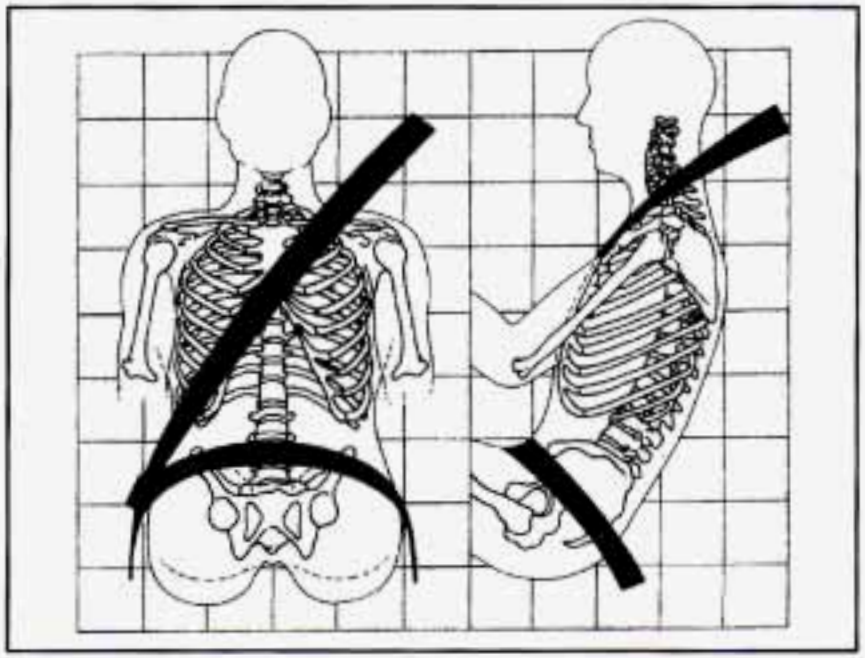


This safety belt is called "automatic" because you don't have to buckle up when you get into your vehicle.



And you don't have to unbuckle when you get out.

Just get into your vehicle. Then close and lock the door. Adjust the seat (to see how, see "Seats" in the Index) so you can sit up straight.



The lap belt should be worn as low on the hips as possible. In a crash, this applies force to the strong pelvic bones. And you'd be less likely to slide under the lap belt. If you slid under it, the belt would apply force at your abdomen. This could cause serious or even fatal injuries. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

The safety belt locks if there's a sudden stop or a crash.

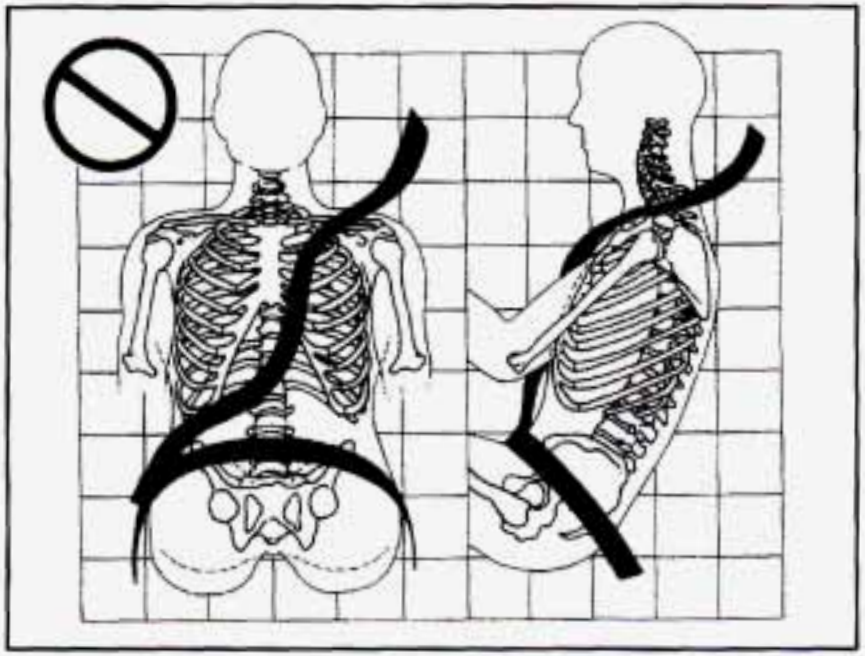
It's possible that an automatic belt could keep you from fully opening a door. That can happen if the door was slammed shut very hard. Just close the door all the way, then slowly open it. If that doesn't fix it, then your Buick needs service.

We hope you'll always keep your automatic belt buckled. However, you may need to unbuckle it in an emergency. And you would need to unbuckle it to let someone get into the center front seat position, if your vehicle has one. To unbuckle the automatic belt, just push the button on the buckle.

To reattach the automatic belt:

1. Close and lock the door.
2. Adjust the seat (to see how, see "Seats" in the Index) so you can sit up straight.
3. Pick up the latch plate and pull the belt across you. Don't let it get twisted.
4. Push the latch plate into the buckle until it clicks. Pull up on the latch plate to make sure it is secure.

**Q:** What's wrong with this?

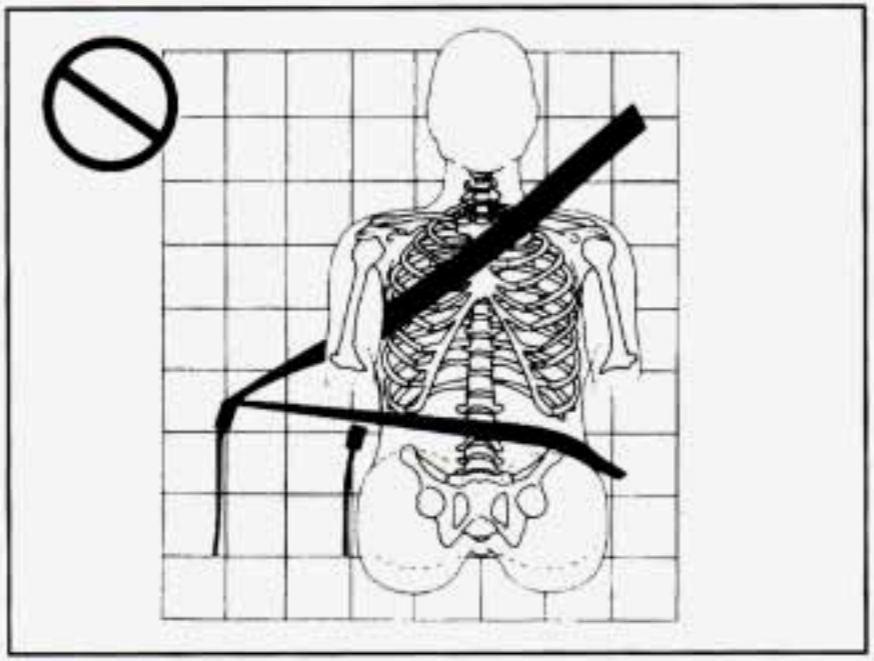


**A:** The shoulder belt is too loose. It won't give nearly as much protection this way.

**⚠ CAUTION:**

**You can be seriously hurt if your shoulder belt is too loose. In a crash you would move forward too much, which could significantly increase injury. The shoulder belt should fit against your body.**

**Q:** What's wrong with this?

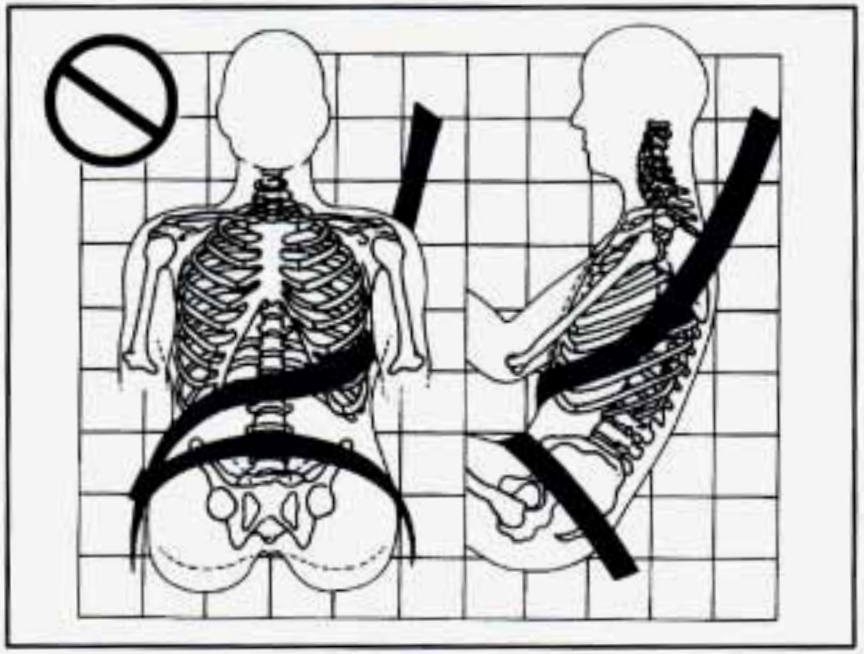


**A:** The belt is buckled in the wrong place.

**⚠ CAUTION:**

**You can be seriously injured if your belt is buckled in the wrong place like this. In a crash, the belt would go up over your abdomen. The belt forces would be there, not at the pelvic bones. This could cause serious internal injuries. Always buckle your belt into the buckle nearest you.**

**Q:** **What's wrong with this?**

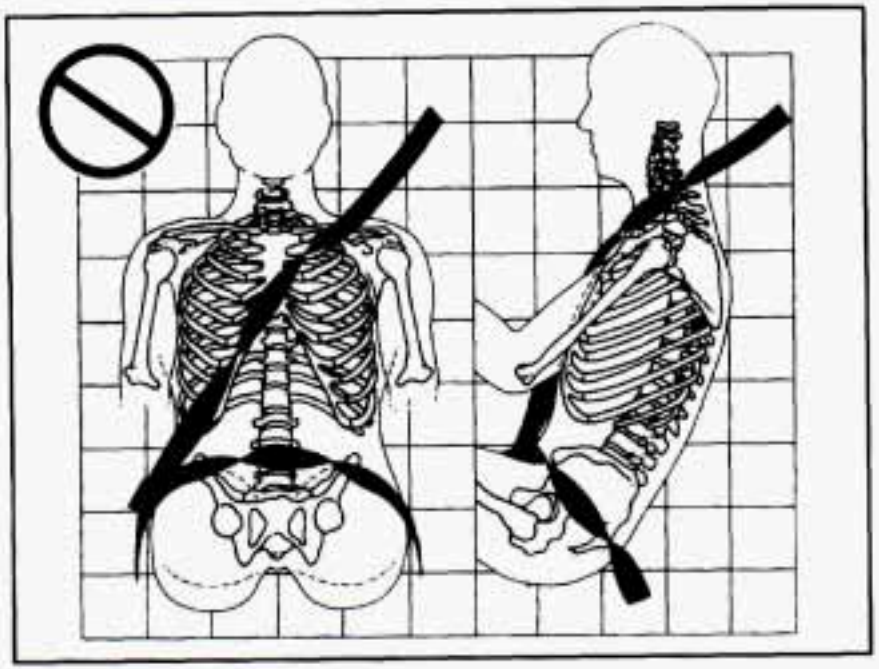


**A:** The shoulder belt is worn under the arm. It should be worn over the shoulder at all times.

**⚠ CAUTION:**

**You can be seriously injured if you wear the shoulder belt under your arm. In a crash, your body would move too far forward, which would increase the chance of head and neck injury. Also, the belt would apply too much force to the ribs, which aren't as strong as shoulder bones. You could also severely injure internal organs like your liver or spleen.**

**Q:** What's wrong with this?



**A:** The belt is twisted across the body.

**⚠ CAUTION:**

**You can be seriously injured by a twisted belt. In a crash, you wouldn't have the full width of the belt to take impact forces. If a belt is twisted, make it straight so it can work properly, or ask your dealer to fix it.**

# Supplemental Restraint System (SRS)

This part explains the Supplemental Restraint System (SRS), or air bag.

Your Buick has an air bag for the driver.

Here are the most important things to know about the air bag system:

**⚠ CAUTION:**

**You can be severely injured or killed in a crash if you aren't wearing your safety belt -- even if you have an air bag. Wearing your safety belt during a crash helps reduce your chance of hitting things inside the vehicle or being ejected from it. The air bag is only a "supplemental restraint." That is, it works with safety belts but doesn't replace them. Air bags are designed to work only in moderate to severe crashes where the front of your vehicle hits something. They aren't designed to inflate at all in rollover, rear, side, or low-speed frontal crashes. Everyone in your vehicle, including the driver, should wear a safety belt properly -- whether or not there's an air bag for that person.**

**⚠ CAUTION:**

**Air bags inflate with great force, faster than the blink of an eye. If you're too close to an inflating air bag, it could seriously injure you. Safety belts help keep you in position for an air bag inflation in a crash. Always wear your safety belt, even with an air bag, and sit as far back as you can while still maintaining control of your vehicle.**

There is an air bag readiness light on the instrument panel, which shows AIRBAG.

The system checks the air bag's electrical system for malfunctions. The light tells you if there is an electrical problem. See "Air Bag Readiness Light" in the Index for more information.

## How the Air Bag System Works

### Where is the air bag?

The driver's air bag is in the middle of the steering wheel.

**⚠ CAUTION:**

**Don't put anything on, or attach anything to, the steering wheel. Also, don't put anything (such as pets or objects) between the driver and the steering wheel. If something is between an occupant and an air bag, it could affect the performance of the air bag -- or worse, it could cause injury.**

### When should an air bag inflate?

The air bag is designed to inflate in moderate to severe frontal or near-frontal crashes. The air bag will inflate only if the impact speed is above the system's designed "threshold level." If your vehicle goes straight into a wall that doesn't move or deform, the threshold level is about 9 to 15 mph (14 to 24 km/h). The threshold level can vary, however, with specific vehicle design, so that it can be somewhat above or below this range. If your vehicle strikes something that will move or deform, such as a parked car, the threshold level will be higher. The air bag is not designed to inflate in rollovers, side impacts, or rear impacts, because inflation would not help the occupant.

In any particular crash, no one can say whether an air bag should have inflated simply because of the damage to a vehicle or because of what the repair costs were. Inflation is determined by the angle of the impact and the vehicle's deceleration. Vehicle damage is only one indication of this.

**What makes an air bag inflate?**

In a frontal or near-frontal impact of sufficient severity, the air bag sensing system detects that the vehicle is suddenly stopping as a result of a crash. The sensing system triggers a chemical reaction of the sodium azide sealed in the inflator. The reaction produces nitrogen gas, which inflates the air bag. The inflator, air bag, and related hardware are all part of the air bag module packed inside the steering wheel.

**How does an air bag restrain?**

In moderate to severe frontal or near-frontal collisions, even belted occupants can contact the steering wheel. The air bag supplements the protection provided by safety belts. Air bags distribute the force of the impact more evenly over the occupant's upper body, stopping the occupant more gradually. But air bags would not help you in many types of collisions, including rollovers and rear and side impacts, primarily because an occupant's motion is not toward the air bag. Air bags should never be regarded as anything more than a supplement to safety belts, and then only in moderate to severe frontal or near-frontal collisions.

**What will you see after an air bag inflates?**

After the air bag inflates, it quickly deflates. This occurs so quickly that some people may not even realize the air bag inflated. Some components of the air bag module in the steering wheel hub will be hot for a short time, but the part of the bag that comes into contact with you will not be hot to the touch. There will be some smoke and dust coming from vents in the deflated air bag. Air bag inflation will not prevent the driver from seeing or from being able to steer the vehicle, nor will it stop people from leaving the vehicle.

**⚠ CAUTION:**

**When an air bag inflates, there is dust in the air. This dust could cause breathing problems for people with a history of asthma or other breathing trouble. To avoid this, everyone in the vehicle should get out as soon as it is safe to do so. If you have breathing problems but can't get out of the vehicle after an air bag inflates, then get fresh air by opening a window or door.**

- The air bag is designed to inflate only once. After it inflates, you'll need some new parts for your air bag system. If you don't get them, the air bag system won't be there to help protect you in another crash. A new system will include the air bag module and possibly other parts. The service manual for your vehicle covers the need to replace other parts.
- Your vehicle is equipped with a diagnostic module, which records information about the air bag system. The module records information about the readiness of the system, when the sensors are activated and driver's safety belt usage at deployment.
- Let only qualified technicians work on your air bag system. Improper service can mean that your air bag system won't work properly. See your dealer for service.

**NOTICE:**

**If you damage the cover for the driver's air bag, it may not work properly. You may have to replace the air bag module. Do not open or break the air bag cover.**

## Servicing Your Air Bag-Equipped Buick

The air bag affects how your Buick should be serviced. There are parts of the air bag system in several places around your vehicle. You don't want the system to inflate while someone is working on your vehicle. Your Buick dealer and the 1995 Century Service Manual have information about servicing your vehicle and the air bag system. To purchase a service manual, see "Service Publications" in the Index. The air bag system does not need regular maintenance.

**⚠ CAUTION:**

**For up to 2 minutes after the ignition key is turned off and the battery is disconnected, an air bag can still inflate during improper service. You can be injured if you are close to an air bag when it inflates. Avoid wires wrapped with yellow tape, or yellow connectors. They are probably part of the air bag system. Be sure to follow proper service procedures, and make sure the person performing work for you is qualified to do so.**

## Safety Belt Use During Pregnancy

Safety belts work for everyone, including pregnant women. Like all occupants, they are more likely to be seriously injured if they don't wear safety belts.

A pregnant woman should wear a lap-shoulder belt, and the lap portion should be worn as low as possible throughout the pregnancy.

The best way to protect the fetus is to protect the mother. When a safety belt is worn properly, it's more likely that the fetus won't be hurt in a crash. For pregnant women, as for anyone, the key to making safety belts effective is wearing them properly.

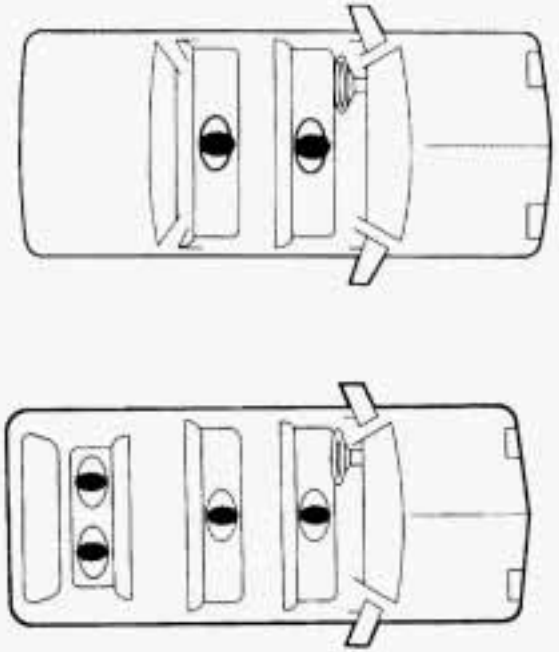
## Right Front Passenger Position

Was your Buick first sold when new in Canada? (If it was, a sticker on the driver's door will say "conforms to all applicable Canada motor vehicle . . ." etc.) If so, then to use your right front passenger position safety belts read the Canadian Owner's Manual Safety Belt Supplement. It comes with every new Buick first sold in Canada.

The right front passenger's safety belt works the same way as the driver's safety belt. See "Driver Position," earlier in this section.

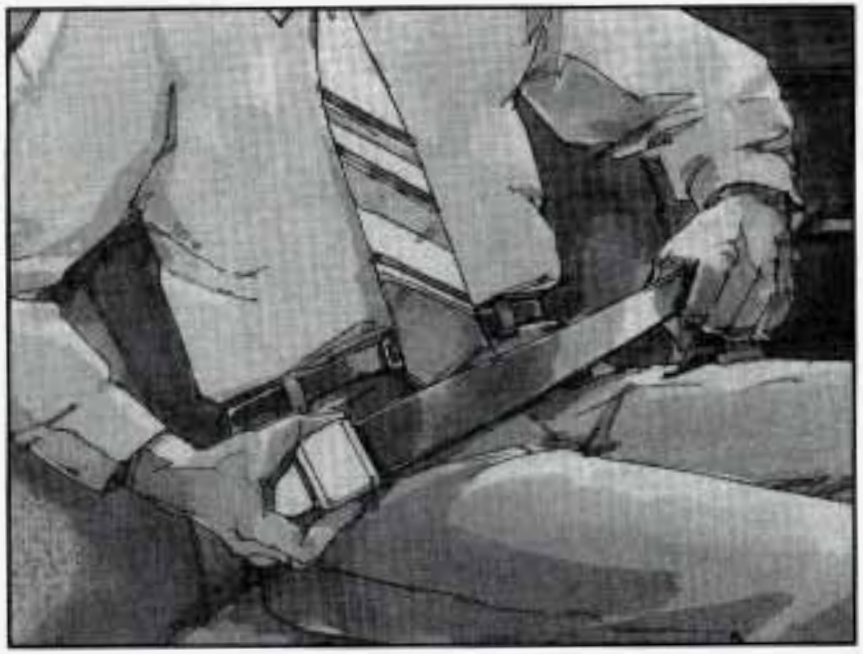
- Adjust the seat (to see how, see "Seats" in the Index) so you can sit up straight. Move your seat far enough forward that your feet touch the part of the car that is called the "toeboard" (A). That way you'd be less likely to slide under the lap belt in a crash.

## Center Passenger Position and Any Station Wagon Third Seat Passenger Position



## Lap Belt

If your vehicle has a front split seat and a rear bench seat, someone can sit in the center positions.



When you sit in a center seating position or in a station wagon third seat, you have a lap safety belt, which has no retractor. To make the belt longer, tilt the latch plate and pull it along the belt.

To make the belt shorter, pull its free end as shown until the belt is snug.

Buckle, position and release it the same way as the lap part of a lap-shoulder belt. If the belt isn't long enough, see "Safety Belt Extender" at the end of this section.

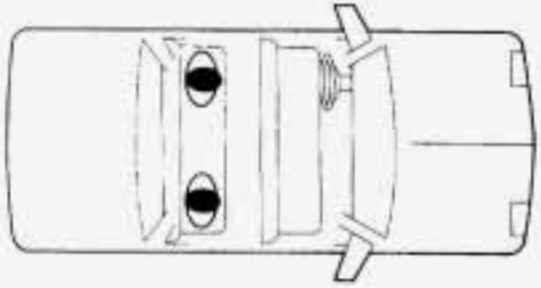
Make sure the release button on the buckle is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.

# Rear Seat Passengers

It's very important for rear seat passengers to buckle up! Accident statistics show that unbelted people in the rear seat are hurt more often in crashes than those who are wearing safety belts.

Rear passengers who aren't safety belted can be thrown out of the vehicle in a crash. And they can strike others in the vehicle who are wearing safety belts.

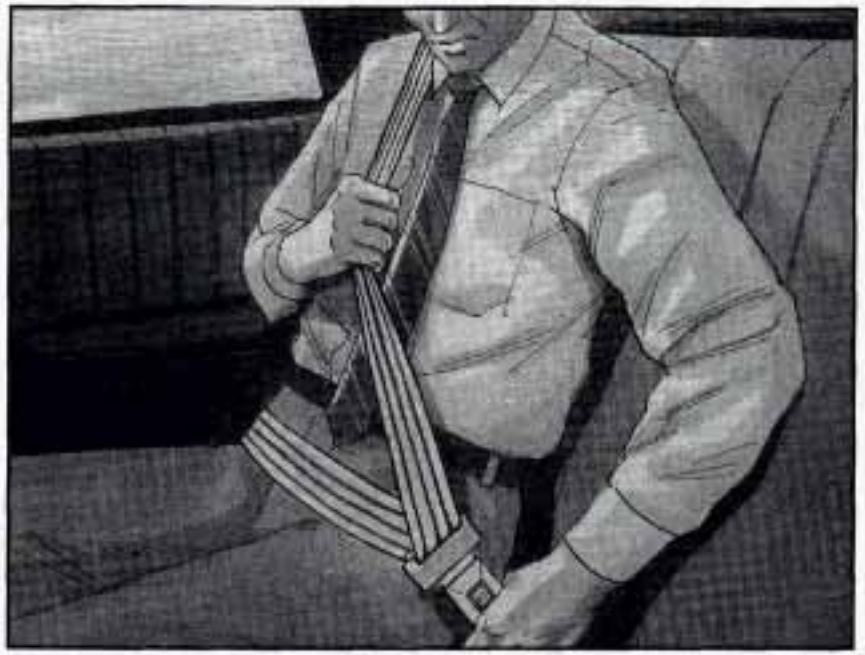
## Rear Seat Outside Passenger Positions



### Lap-Shoulder Belt

The positions next to the windows have lap-shoulder belts. Here's how to wear one properly.

1. Pick up the latch plate and pull the belt across you. Don't let it get twisted.
2. Push the latch plate into the buckle until it clicks.

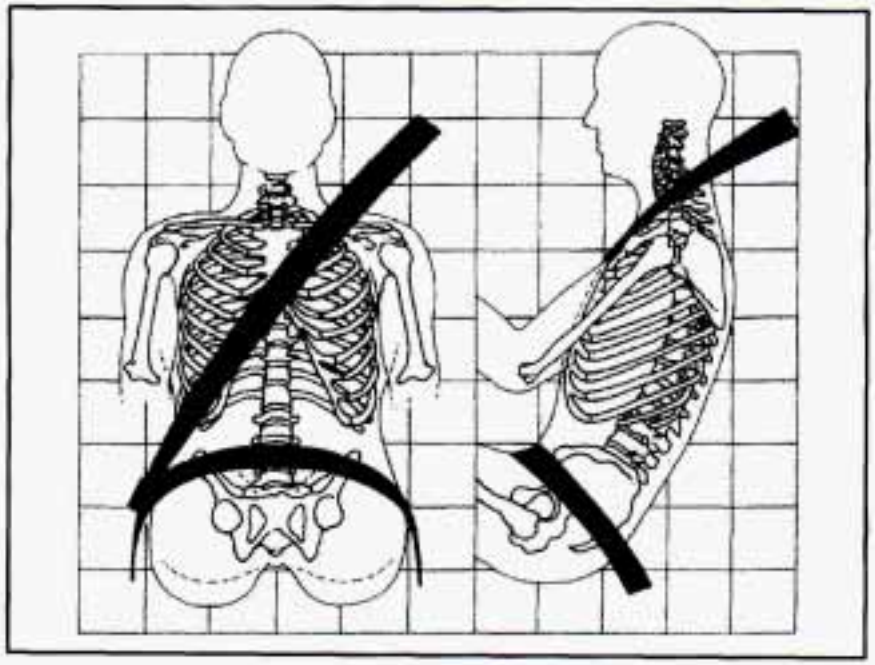


If the belt stops before it reaches the buckle, tilt the latch plate and keep pulling until you can buckle it.

Pull up on the latch plate to make sure it is secure.

If the belt is not long enough, see "Safety Belt Extender" at the end of this section. Make sure the release button on the buckle is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.

3. To make the lap part tight, pull down on the buckle end of the belt as you pull up on the shoulder part.



The lap part of the belt should be worn low and snug on the hips, just touching the thighs. In a crash, this applies force to the strong pelvic bones. And you'd be less likely to slide under the lap belt. If you slid under it, the belt would apply force at your abdomen. This could cause serious or even fatal injuries. The shoulder belt should go over the shoulder and across the chest. These parts of the body are best able to take belt restraining forces.

The safety belt locks if there's a sudden stop or a crash.

**⚠ CAUTION:**

**You can be seriously hurt if your shoulder belt is too loose. In a crash you would move forward too much, which could increase injury. The shoulder belt should fit against your body.**

To unlatch the belt, just push the button on the buckle.

# Children

Everyone in a vehicle needs protection! That includes infants and all children smaller than adult size. In fact, the law in every state in the United States and in every Canadian province says children up to some age must be restrained while in a vehicle.

## Smaller Children and Babies

**⚠ CAUTION:**

**Smaller children and babies should always be restrained in a child or infant restraint. The instructions for the restraint will say whether it is the right type and size for your child. A very young child's hip bones are so small that a regular belt might not stay low on the hips, as it should. Instead, the belt will likely be over the child's abdomen. In a crash the belt would apply force right on the child's abdomen, which could cause serious or fatal injuries. So, be sure that any child small enough for one is always properly restrained in a child or infant restraint.**

**CAUTION: (Continued)**

**at only 25 mph (40 km/h), a 12-pound (5.5 kg) baby will suddenly become a 240-pound (110 kg) force on your arms. The baby would be almost impossible to hold.**

**Secure the baby in an infant restraint.**

**⚠ CAUTION:**

**Never hold a baby in your arms while riding in a vehicle. A baby doesn't weigh much -- until a crash. During a crash a baby will become so heavy you can't hold it. For example, in a crash**

**CAUTION: (Continued)**

## Child Restraints

Be sure to follow the instructions for the restraint. You may find these instructions on the restraint itself or in a booklet, or both. These restraints use the belt system in your vehicle, but the child also has to be secured within the restraint to help reduce the chance of personal injury. The instructions that come with the infant or child restraint will show you how to do that.

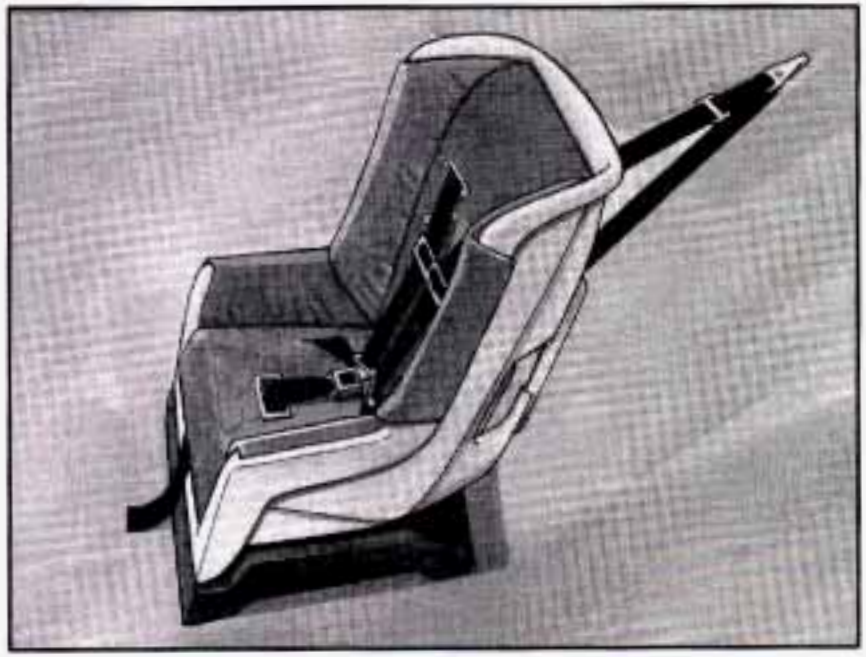
### Where to Put the Restraint

Accident statistics show that children are safer if they are restrained in the rear rather than the front seat. We at General Motors therefore recommend that you put your child restraint in the rear seat unless the child is an infant and you're the only adult in the vehicle. In that case, you might want to secure the restraint in the front seat where you can keep an eye on the baby.

Wherever you install it, be sure to secure the child restraint properly.

Keep in mind that an unsecured child restraint can move around in a collision or sudden stop and injure people in the vehicle. Be sure to properly secure any child restraint in your vehicle -- even when no child is in it.

### Top Strap



If your child restraint has a top strap, it should be anchored.

If you need to have an anchor installed, you can ask your Buick dealer to put it in for you. If you want to install an anchor yourself, your dealer can tell you how to do it.

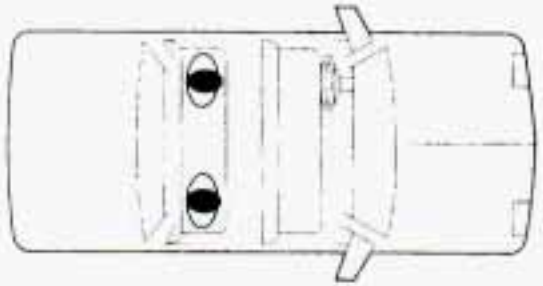
If you want to use a child restraint with a top strap in the second seat of a station wagon, have your dealer install a combination anchor-tether belt to which the top strap can be hooked.

For cars first sold in Canada, child restraints with a top strap must be anchored according to Canadian Law.

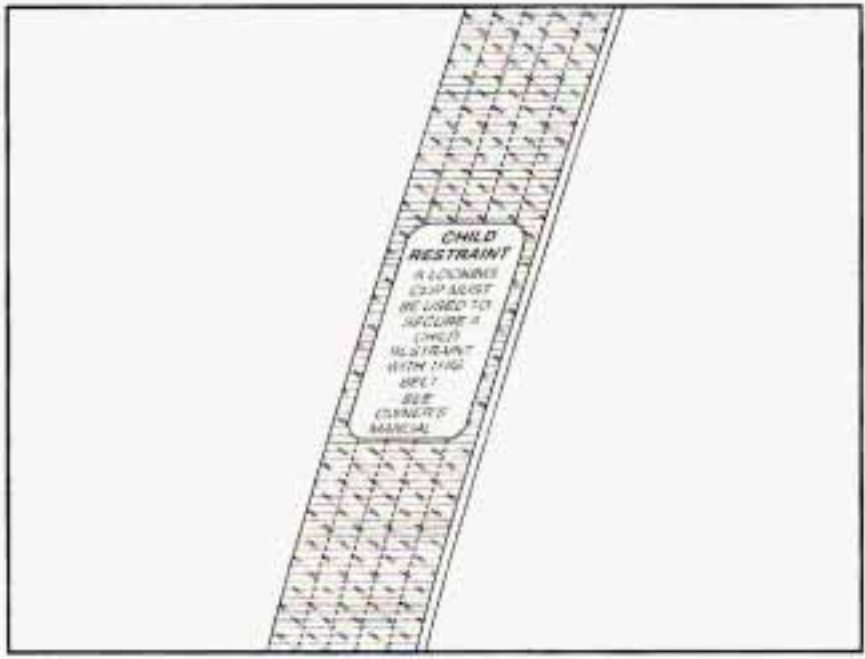
Your dealer can obtain the hardware kit and install it for you, or you may install it yourself using the instructions provided in the kit.

Use the tether hardware kit available from the dealer. The hardware and installation instructions were specifically designed for this vehicle.

## Securing a Child Restraint in a Rear Outside Seat Position



Your vehicle has one of two lap-shoulder belt systems.



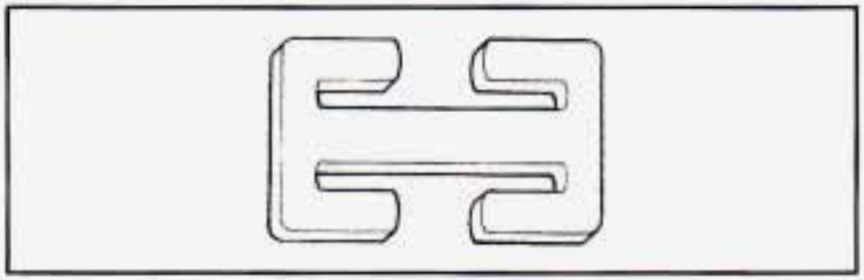

To tell which system you have, see whether this label is on the lap shoulder belt. You may have to pull on the shoulder part of the belt to see the label. The label tells you that a locking clip must be used to secure a child restraint.

If this label is on the lap-shoulder belt, your vehicle has Lap-Shoulder Belt System A. Read 1-35 through 1-37 to see how to secure a child restraint properly. If the label isn't on the lap-shoulder belt, your vehicle has Lap-Shoulder Belt System B. Read 1-37 and 1-38 to see how to secure a child restraint properly.

## Lap-Shoulder Belt System A

You'll be using the lap-shoulder belt. See the earlier part about the top strap if the child restraint has one.

You'll need a safety locking clip to properly secure a child restraint in this position. You can get a locking clip where child restraints are sold, or from your Buick dealer (GM Part Number 94844571). The locking clip must be the same as the one shown here.



Until you have this clip, secure a child restraint only in a seat that has a separate lap belt (and a way to anchor a top strap, if the child restraint has one). See the following part about securing a child restraint in a center position. Once you have the clip, follow these instructions:

1. Put the restraint on the seat. Follow the instructions for the child restraint.
2. Secure the child in the child restraint as the instructions say.
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how. Tilt the latch plate to adjust the belt if needed.

   If the shoulder belt goes in front of the child's face or neck, put it behind the child restraint.
4. Buckle the belt. Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.

5. Then thread both the lap and shoulder belt portions through the locking clip.

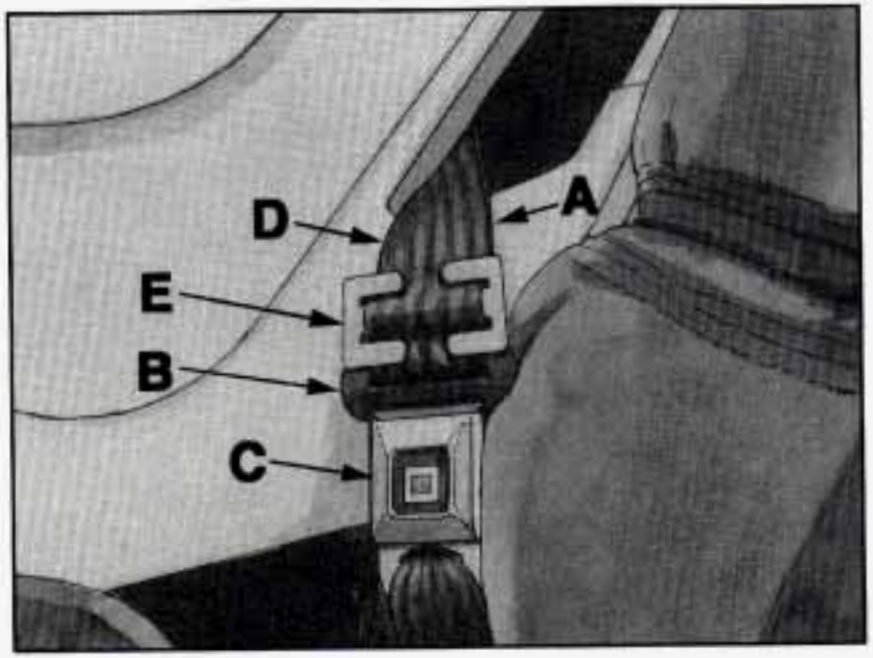
**⚠ CAUTION:**

**If a locking clip is not used or is not installed properly, the child restraint may move or tip over when your vehicle turns or stops quickly. The**

**CAUTION: (Continued)**

**CAUTION: (Continued)**

**child or others could be injured. When you secure a child restraint with a lap-shoulder belt, always thread both the lap and shoulder belt portions through a locking clip.**




A. Lap Belt Portion
B. Latch Plate
C. Buckle
D. Shoulder Belt Portion
E. Locking Clip

6. Push and pull the child restraint in different directions to be sure it is secure.

To remove the child restraint, just unbuckle the vehicle's safety belt and remove the locking clip. Let the safety belt go back all the way. The safety belt will move freely again and be ready to work for an adult or larger child passenger.

**⚠ CAUTION:**

**When not used with a child restraint seat, a safety belt with a child restraint locking clip still attached can cause serious injury in a crash. Always remove the clip when you are not using it with a child restraint.**

## Lap-Shoulder Belt System B

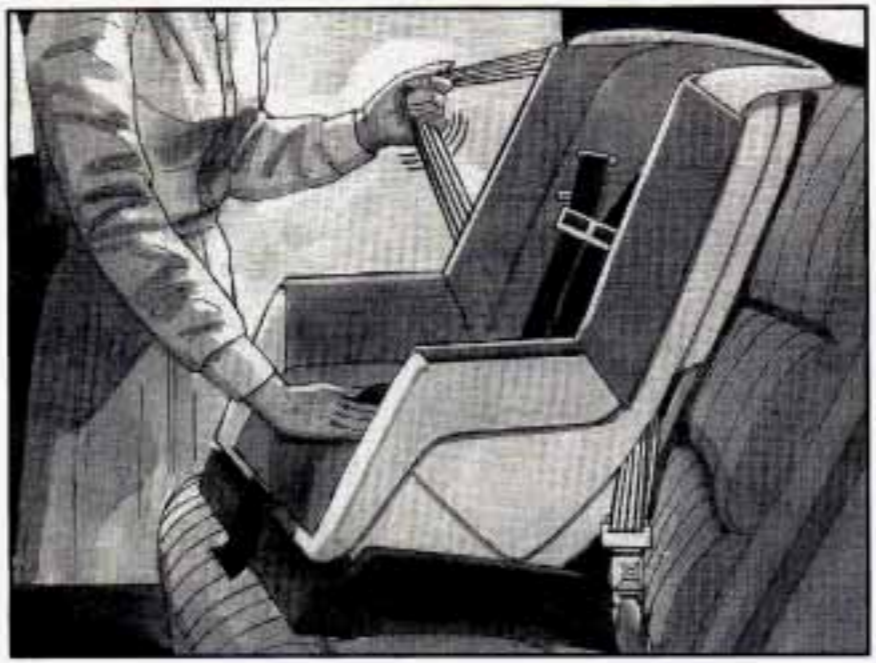
You'll be using the lap-shoulder belt.

See the earlier part about the top strap if the child restraint has one.

1. Put the restraint on the seat. Follow the instructions for the child restraint.
2. Secure the child in the child restraint as the instructions say.
3. Pick up the latch plate, and run the lap and shoulder portions of the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how. Tilt the latch plate to adjust the belt if needed.

   If the shoulder belt goes in front of the child's face or neck, put it behind the child restraint.
4. Buckle the belt. Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.

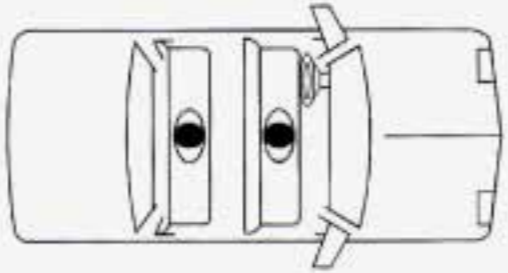
5. To tighten the belt, pull the shoulder belt while you push down on the child restraint.



6. Push and pull the child restraint in different directions to be sure it is secure.

To remove the child restraint, just unbuckle the vehicle's safety belt. It will be ready to work for an adult or larger child passenger.

## Securing a Child Restraint in a Center Seat Position



You'll be using the lap belt.

See the earlier part about the top strap if the child restraint has one.

1. Make the belt as long as possible by tilting the latch plate and pulling it along the belt.

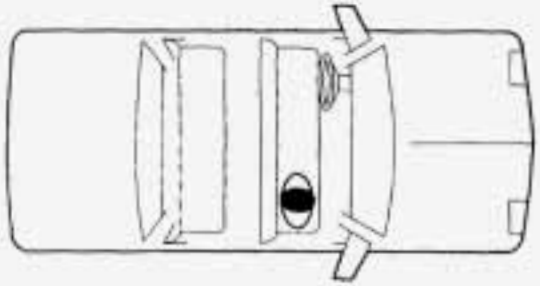
2. Put the restraint on the seat. Follow the instructions for the child restraint.
3. Secure the child in the child restraint as the instructions say.
4. Run the vehicle's safety belt through or around the restraint. The child restraint instructions will show you how.

5. Buckle the belt. Make sure the release button is positioned so you would be able to unbuckle the safety belt quickly if you ever had to.
6. To tighten the belt, pull its free and while you push down on the child restraint.

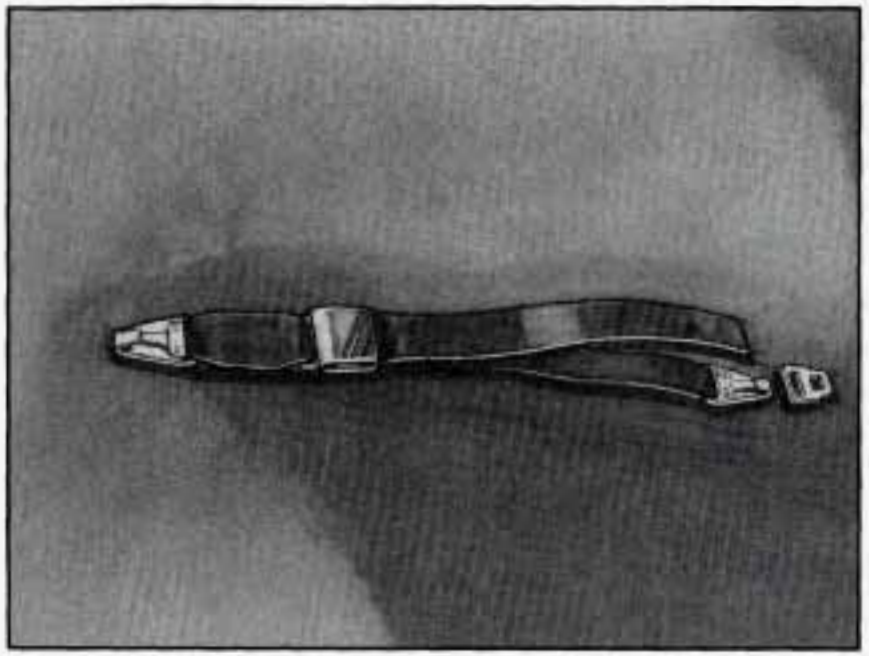
7. Push and pull the child restraint in different directions to be sure it is secure. If the child restraint isn't secure, turn the latch plate over and buckle it again. Then see if it is secure. If it isn't, secure the restraint in a different place in the vehicle and contact the child restraint maker for their advice about how to attach the child restraint properly.

To remove the child restraint, just unbuckle the vehicle's safety belt and let it go back all the way. The safety belt will move freely again and be ready to work for an adult or larger child passenger.

## Securing a Child Restraint in the Right Front Seat Position



Was your Buick first sold, when new, in Canada? (If it was, a sticker on the driver's door will say "conforms to all applicable Canada motor vehicle . . . " etc.) If so, then this "Securing a Child Restraint in the Right Front Seat Position" part doesn't apply to your vehicle. To learn how to secure a child restraint in the right front seat, read the *Canadian Owner's Manual Safety Belt Supplement*. It comes with every new Buick first sold in Canada.



To use a child restraint here, you will need a special infant/child seat attaching belt and the hardware that goes with it. See the earlier part about the top strap if the child restraint has one.

Your dealer can order the belt and attaching hardware and install the hardware for you. It's free. The special belt is GM Part No. 12340286. Your dealer can find the part number for the correct attaching hardware in the accessory section of the GM Parts Catalog.

**⚠ CAUTION:**

**Don't use the special infant/child seat attaching hardware in another vehicle. If you do, it may not work well and the child may not be protected properly in a crash. The special hardware is for your vehicle only.**

**Also, don't use the special belt for anything but securing a child restraint in the right front seat. If an adult or older child uses it, the belt won't provide protection and may even increase injury in a crash.**

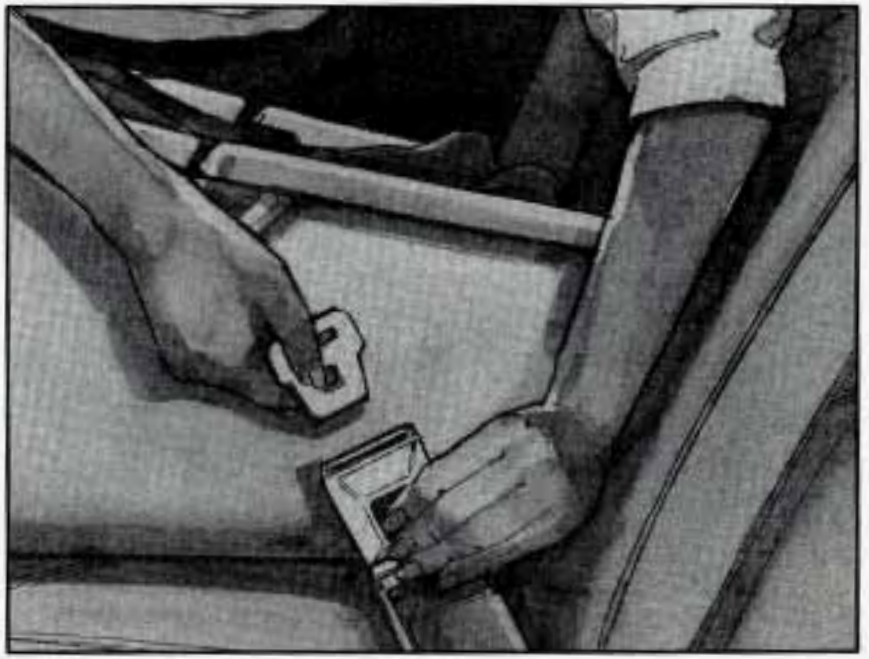
Once the special hardware is installed, please follow the instructions with it and these steps:

1. Unbuckle the automatic lap-shoulder belt by pushing the button on the buckle.

It will stay on the door, ready to be rebuckled for use by adults or older children.

2. Snap one hook of the infant/child seat attaching belt near the floor at the door side of the seat.

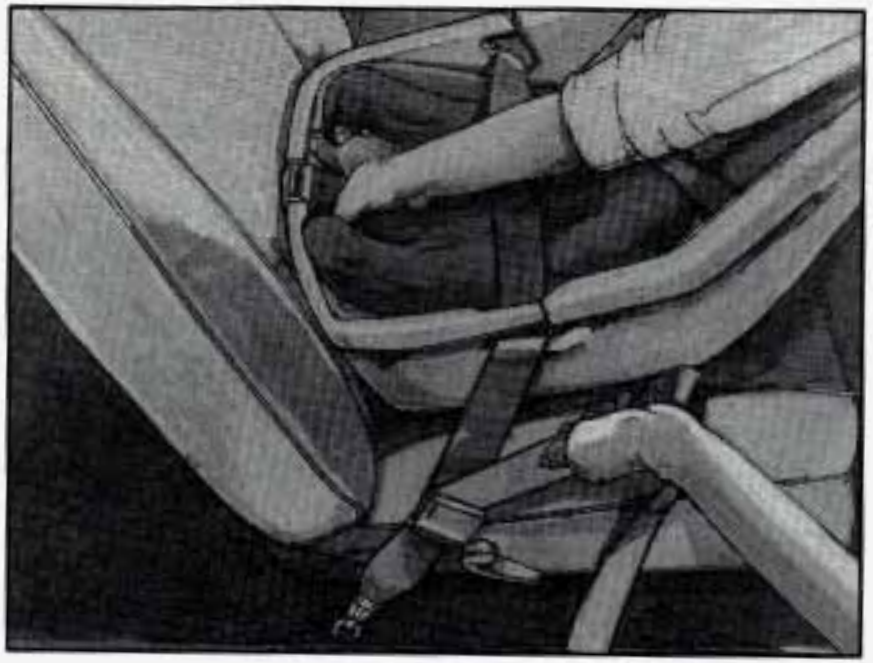
3. Put the belt's special latch plate into the vehicle's safety belt buckle.



4. You can make the belt longer by tilting the buckle and pulling it along the belt.

5. Put the restraint on the seat. Follow the instructions for the child restraint.
6. Secure the child in the child restraint as the instructions say.
7. Run the belt through or around the child restraint. The child restraint instructions will show you how.
8. Put the hook on the free end through the slot in the latch plate.

9. To make it tight, pull the belt while you push down on the child restraint. If the belt won't stay tight, switch it end for end.



10. Push and pull the child restraint in different directions to be sure it is secure.

**To remove the infant/child seat restraint:**

1. Push the button on the safety belt buckle and remove the special latch plate. Leave the latch plate on the special belt.
2. Push the spring on the hook near the door and remove the special belt.
3. Put the belt away in a safe place in your vehicle, so it won't fly around in a crash and injure someone.
4. Remember to reattach the automatic belt again, once the child restraint is removed. Be sure it isn't twisted.

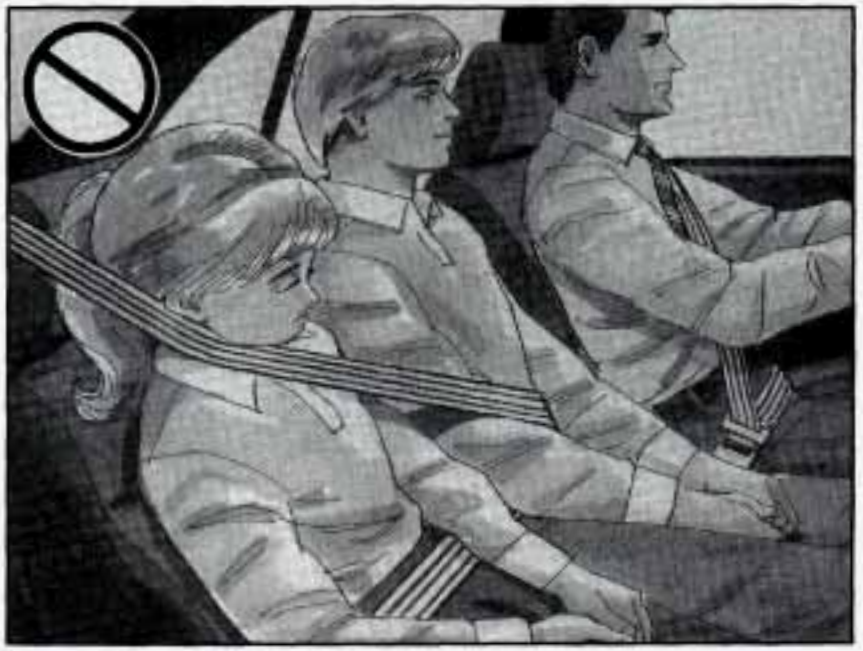
## Larger Children

Children who have outgrown child restraints should wear the vehicle's safety belts.

If you have the choice, a child should sit next to a window so the child can wear a lap-shoulder belt and get the additional restraint a shoulder belt can provide.

Accident statistics show that children are safer if they are restrained in the rear seat. But they need to use the safety belts properly.

- Children who aren't buckled up can be thrown out in a crash.
- Children who aren't buckled up can strike other people who are.



**⚠ CAUTION:**

**Never do this.**

**CAUTION: (Continued)**

**CAUTION: (Continued)**

**Here two children are wearing the same belt. The belt can't properly spread the impact forces. In a crash, the two children can be crushed together and seriously injured. A belt must be used by only one person at a time.**

***Q:*** **What if a child is wearing a lap-shoulder belt, but the child is so small that the shoulder belt is very close to the child's face or neck?**

**A:** Move the child toward the center of the vehicle, but be sure that the shoulder belt still is on the child's shoulder, so that in a crash the child's upper body would have the restraint that belts provide. If the child is so small that the shoulder belt is still very close to the child's face or neck, you might want to place the child in the center seat position, the one that has only a lap belt.

**⚠ CAUTION:**

**Never do this.**

**Here a child is sitting in a seat that has a lap-shoulder belt, but the shoulder part is behind the child. If the child wears the belt in this way, in a crash the child might slide under the belt. The belt's force would then be applied right on the child's abdomen. That could cause serious or fatal injuries.**

Wherever the child sits, the lap portion of the belt should be worn low and snug on the hips, just touching the child's thighs. This applies belt force to the child's pelvic bones in a crash.

## Safety Belt Extender

If the vehicle's safety belt will fasten around you, you should use it. The front seat lap-shoulder belts have plenty of extra length built in, so they will fit almost all people.

But if a safety belt isn't long enough to fasten, your dealer will order you an extender. It's free. When you go in to order it, take the heaviest coat you will wear, so the extender will be long enough for you. The extender will be just for you, and just for the seat in your vehicle that you choose. Don't let someone else use it, and use it only for the seat it is made to fit. To wear it, just attach it to the regular safety belt.

## Checking Your Restraint Systems

Now and then, make sure all your belts, buckles, latch plates, retractors, anchorages and reminder warning systems are working properly. Look for any other loose or damaged restraint system parts. If you see anything that might keep a restraint system from doing its job, have it repaired.

Torn or frayed belts may not protect you in a crash. They can rip apart under impact forces. If a belt is torn or frayed, get a new one right away.

## Replacing Seat and Restraint System Parts After a Crash

If you've had a crash, do you need new belts?

After a very minor collision, nothing may be necessary. But if the belts were stretched, as they would be if worn during a more severe crash, then you need new belts.

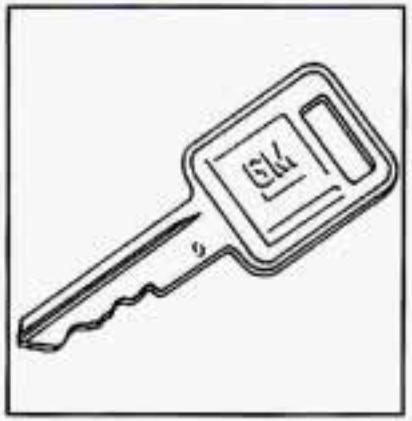
If belts are cut or damaged, replace them. Collision damage also may mean you will need to have safety belt or seat parts repaired or replaced. New parts and repairs may be necessary even if the belt wasn't being used at the time of the collision.

# Section 2 Features and Controls

Here you can learn about the many standard and optional features on your Buick, and information on starting, shifting and braking. Also explained are the instrument panel and the warning systems that tell you if everything is working properly -- and what to do if you have a problem.

## Keys

> **⚠ CAUTION:**
>
> **Leaving young children in a vehicle with the ignition key is dangerous for many reasons. A child or others could be badly injured or even killed.**
>
> **They could operate power windows or other controls or even make the vehicle move. Don't leave the keys in a vehicle with young children.**



The ignition keys are for the ignition only.

The door keys are for the doors and all other locks.

When a new Century is delivered, the dealer removes the plugs from the keys, and gives them to the first owner.

Each plug has a code on it that tells your dealer or a qualified locksmith how to make extra keys. Keep the plugs in a safe place. If you lose your keys, you'll be able to have new ones made easily using these plugs.

## NOTICE:

**Your Buick has a number of new features that can help prevent theft. But you can have a lot of trouble getting into your vehicle if you ever lock your keys inside. You may even have to damage your vehicle to get in. So be sure you have extra keys.**

# Door Locks

**⚠ CAUTION:**

**Unlocked doors can be dangerous.**

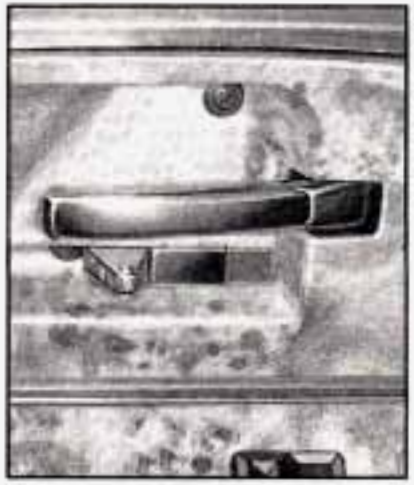
**Passengers -- especially children -- can easily open the doors and fall out. When a door is locked, the inside handle won't open it.**

**Outsiders can easily enter through an unlocked door when you slow down or stop your vehicle.**

**This may not be so obvious: You increase the chance of being thrown out of the vehicle in a crash if the doors aren't locked. Wear safety belts properly, lock your doors, and you will be far better off whenever you drive your vehicle.**

There are several ways to lock and unlock your vehicle:

From the outside: Use your door key or Remote Keyless Entry transmitter, if your vehicle has this option.



From the inside: To lock the door, slide the lock control on the door rearward.

To unlock the door, slide the lock control forward.

## Power Door Locks

Press the power door lock switch on either front door to lock or unlock all the doors at once.

## Automatic Door Locks

Just close your doors and turn on the ignition. All of the doors will automatically lock when you move your shift lever out of PARK (P) or NEUTRAL (N). If someone needs to get out while the vehicle is running, have that person use the manual or power lock. When the door is closed again, it will lock automatically if the transaxle is in gear. All doors will automatically unlock when you turn the ignition off.

If you don't want the doors to automatically unlock when the key is turned OFF, you can remove the UNLOCK fuse located in the glove box. See "Fuses" in the Index for more information.

## Leaving Your Vehicle

If you are leaving the vehicle, take your keys, open your door and set the locks from inside. Then get out and close the door.

# Remote Keyless Entry System (Option)

If your Buick has this option, you can lock and unlock your doors or unlock your trunk from up to 30 feet (9 m) away using the key chain transmitter supplied with your vehicle.

Your Remote Keyless Entry System operates on a radio frequency subject to Federal Communications Commission (FCC) Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Should interference to this system occur, try this:

- Check to determine if battery replacement is necessary. See the instructions on battery replacement.
- Check the distance. You may be too far from your vehicle. This product has a maximum range.
- Check the location. Other vehicles or objects may be blocking the signal.
- See your Buick dealer or a qualified technician for service.

Changes or modifications to this system by other than an authorized service facility could void authorization to use this equipment.

## Operation

The driver's door will unlock and the interior lights will go on when UNLOCK is pressed. If pressed again within five seconds, all doors will unlock. The interior lights will go out after 40 seconds or when you turn on the ignition.

All doors will lock when DOOR is pressed.

Press the opened trunk symbol to unlock the trunk or wagon liftgate. The transaxle must be in PARK (P). If you have the wagon, the ignition must also be OFF.

## Matching Transmitter(s) To Your Vehicle

Each key chain transmitter is coded to prevent another transmitter from unlocking your vehicle. If a transmitter is lost or stolen, a replacement can be purchased through your dealer. Remember to bring any remaining transmitters with you when you go to your dealer. When the dealer matches the replacement transmitter to your vehicle, the remaining transmitters must also be matched. Once the new transmitter is coded, the lost transmitter will not unlock your vehicle.

You can match a transmitter to as many different vehicles as you own, provided they are equipped with *exactly the same model system.* (General Motors offers several different models of these systems on their vehicles.) Each vehicle can have only two transmitters matched to it.

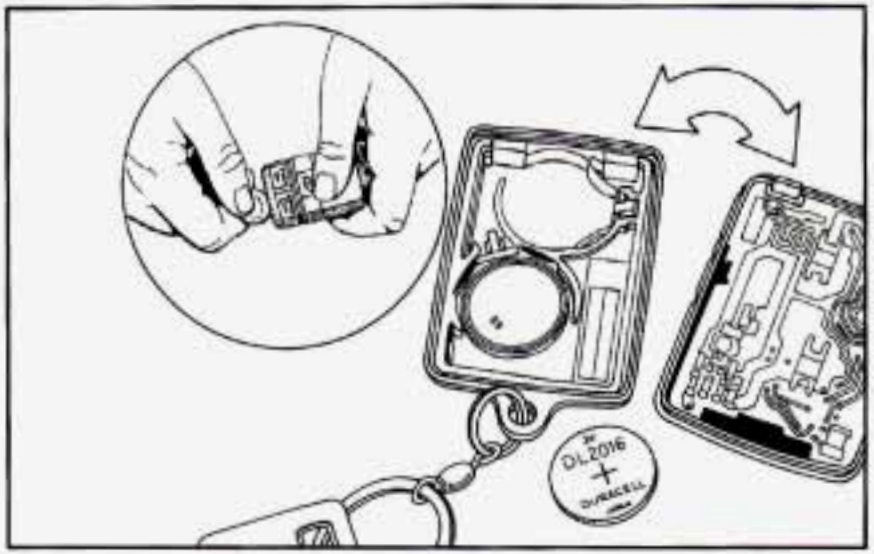
See your dealer to match transmitters to another vehicle.

## Battery Replacement

Under normal use, the batteries in your key chain transmitter should last about two years.

You can tell the batteries are weak if the transmitter won't work at the normal range in any location. If you have to get close to your vehicle before the transmitter works, it's probably time to change the batteries.

For battery replacement use two Duracell® batteries, type DL-2016, or a similar type.




To replace batteries:

1. Carefully pry off the cover by inserting a dime (or similar object) in a slot between the covers and twist.
2. Lift off the front cover, bottom half first.
3. Remove and replace the batteries.
4. Reassemble the transmitter. Make sure the cover is on tightly, so water won't get in and snap the cover together.
5. Check the transmitter operation.

# Trunk/Liftgate

## Remote Trunk or Liftgate Release (Option)

If you have this option, you'll find the button in the glove box.

The trunk will unlock anytime the ignition is ON. If you have the wagon, the liftgate will unlock when the ignition is ON, and the transaxle is in PARK (P).

## Trunk Lock

To unlock the trunk from the outside, insert the door key and turn it clockwise.

## Wagon Liftgate Operation

The liftgate on your wagon has a liftglass and a liftgate.

**NOTICE:**

**Be sure there are no overhead obstructions before you open the liftgate. You could slam the liftgate into something and break the glass.**

The door key opens the liftgate and the liftglass.

Turn the key to the right to unlatch the liftgate, then pull up on the bottom of the liftgate. To close, pull down on the handle inside the liftgate, then firmly shut the liftgate.

Turn the key to the left to release the liftgate glass. Then, pull the glass up by the handle. To close, lower the glass until the latch catches.

## ⚠ CAUTION:

**It can be dangerous to drive with the liftgate, liftglass or trunk lid open because carbon monoxide (CO) gas can come into your vehicle. You can't see or smell CO. It can cause unconsciousness and even death.**

**If you must drive with the liftgate, liftglass or trunk lid open or if electrical wiring or other cable connections must pass through the seal between the body and the liftgate, liftglass or trunk lid:**

- **Make sure all windows are shut.**
- **Turn the fan on your heating or cooling system to its highest speed with the setting on NORM or VENT . That will force outside air into your vehicle. See "Comfort Controls" in the Index.**
- **If you have air outlets on or under the instrument panel, open them all the way.**

**See "Engine Exhaust" in the Index.**

## Glove Box

Use the door key to lock and unlock the glove box. To open, pinch the latch release.

# Theft

Vehicle theft is big business, especially in some cities. Although your Buick has a number of theft deterrent features, we know that nothing we put on it can make it impossible to steal. However, there are ways you can help.

## Key in the Ignition

If you walk away from your vehicle with the keys inside, it's an easy target for joy riders or professional thieves -- so don't do it.

When you park your Buick and open the driver's door, you'll hear a chime reminding you to remove your key from the ignition and take it with you. Always do this. Your steering wheel will be locked, and so will your ignition and transaxle. And remember to lock the doors.

## Parking at Night

Park in a lighted spot, close all windows and lock your vehicle. Remember to keep your valuables out of sight. Put them in a storage area, or take them with you.

## Parking Lots

If you park in a lot where someone will be watching your vehicle, it's best to lock it up and take your keys. But what if you have to leave your ignition key? What if you have to leave something valuable in your vehicle?

- Put your valuables in a storage area, like your trunk or glove box.
- Lock the glove box.
- Lock all the doors except the driver's.
- Then take the door key with you.

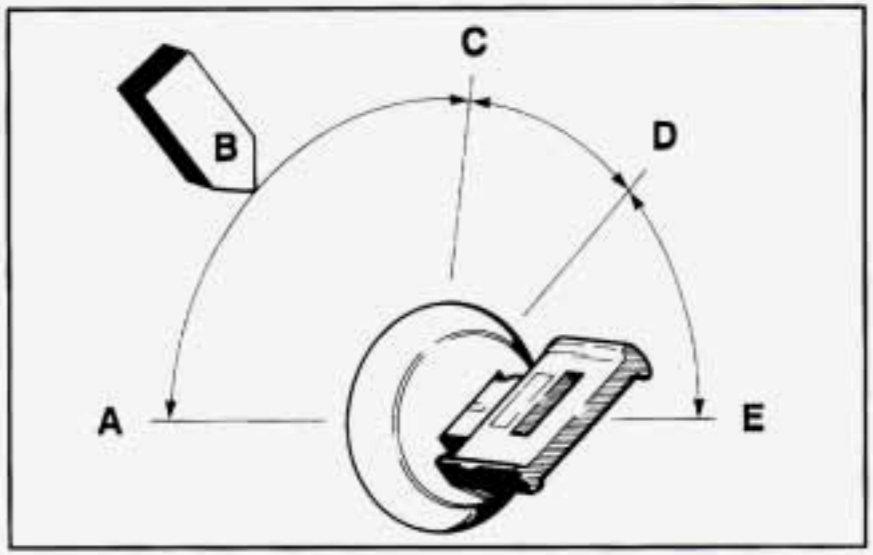
## New Vehicle "Break-In"

### NOTICE:

**Your modern Buick doesn't need an elaborate "break-in." But it will perform better in the long run if you follow these guidelines:**

- **Don't drive at any one speed -- fast or slow -- for the first 500 miles (804 km). Don't make full-throttle starts.**
- **Avoid making hard stops for the first 200 miles (322 km) or so. During this time your new brake linings aren't yet broken in. Hard stops with new linings can mean premature wear and earlier replacement. Follow this "breaking-in" guideline every time you get new brake linings.**
- **Don't tow a trailer during "break-in." See "Towing a Trailer" in the Index for more information.**

# Ignition Key Positions




With the ignition key in the ignition switch, you can turn the switch to five positions:

**(A) Accessory:** An ON position in which you can operate your electrical power accessories. Press in the ignition switch as you turn the top of it toward you.

**(B) Lock:** The only position in which you can remove the key. This locks your steering wheel, ignition and transaxle.

**(C) Off:** Unlocks the steering wheel, ignition, and transaxle, but does not send electrical power to any accessories. Use this position if your vehicle must be pushed or towed, but never try to push-start your vehicle. A warning chime will sound if you open the driver's door when the ignition is off and the key is in the ignition.

**(D) Run:** An ON position to which the switch returns after you start your engine and release the switch. The switch stays in the RUN position when the engine is running. But even when the engine is not running, you can use RUN to operate your electrical power accessories, and to display some instrument panel warning lights.

**(E) Start:** Starts the engine. When the engine starts, release the key. The ignition switch will return to RUN for normal driving.

## NOTICE:

**If your key seems stuck in LOCK and you can't turn it, be sure it is all the way in. If it is, then turn the steering wheel left and right while you turn the key hard. But turn the key only with your hand. Using a tool to force it could break the key or the ignition switch. If none of this works, then your vehicle needs service.**

## Starting Your Engine

Move your shift lever to PARK (P) or NEUTRAL (N). Your engine won't start in any other position -- that's a safety feature. To restart when you're already moving, use NEUTRAL (N) only.

### NOTICE:

**Don't try to shift to PARK (P) if your Buick is moving. If you do, you could damage the transaxle. Shift to PARK (P) only when your vehicle is stopped.**

1. Without pushing the accelerator pedal, turn your ignition key to START. When the engine starts, let go of the key. The idle speed will go down as your engine gets warm.

### NOTICE:

**Holding your key in START for longer than 15 seconds at a time will cause your battery to be drained much sooner. And the excessive heat can damage your starter motor.**

2. If your engine won't start (or starts but then stops), it could be flooded with too much gasoline. Try pushing your accelerator pedal all the way to the floor and holding it there as you hold the key in START for about three seconds. If the car starts briefly but then stops again, do the same thing, but this time keep the pedal down for five or six seconds. This clears the extra gasoline from the engine.

## NOTICE:

Your engine is designed to work with the electronics in your vehicle. If you add electrical parts or accessories, you could change the way the fuel injection system operates. Before adding electrical equipment, check with your dealer. If you don't, your engine might not perform properly.

If you ever have to have your vehicle towed, see the part of this manual that tells how to do it without damaging your vehicle. See "Towing Your Car" in the Index.

## Driving Through Deep Standing Water

### NOTICE:

If you drive too quickly through deep puddles or standing water, water can come in through your engine's air intake and badly damage your engine. Never drive through water that is slightly lower than the underbody of your vehicle. If you can't avoid deep puddles or standing water, drive through them very slowly.

## Engine Coolant Heater (Option)

In very cold weather, 0°F (-18°C) or colder, the engine coolant heater can help. You'll get easier starting and better fuel economy during engine warm-up. Usually, the coolant heater should be plugged in a minimum of four hours prior to starting your vehicle.

**To use the coolant heater:**

1. Turn off the engine.
2. Open the hood and unwrap the electrical cord.
3. Plug it into a normal, grounded 110-volt outlet.

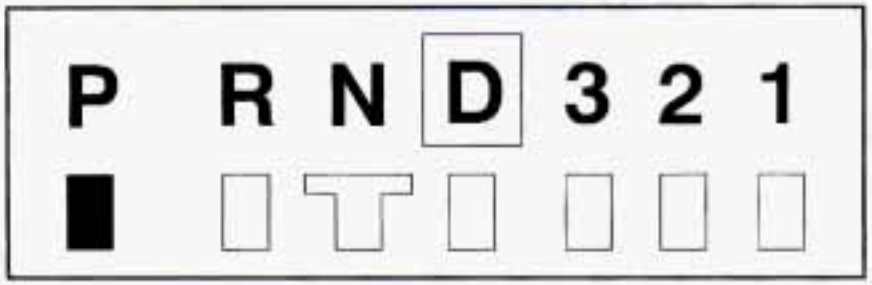
> **⚠ CAUTION:**
>
> **Plugging the cord into an ungrounded outlet could cause an electrical shock. Also, the wrong kind of extension cord could overheat and cause a fire. You could be seriously injured. Plug the cord into a properly grounded three-prong 110-volt outlet. If the cord won't reach, use a heavy-duty three-prong extension cord rated for at least 15 amps.**

> **NOTICE:**
>
> **After you've used the coolant heater, be sure to store the cord as it was before to keep it away from moving engine parts. If you don't, it could be damaged.**

How long should you keep the coolant heater plugged in? The answer depends on the weather, the kind of oil you have, and some other things. Instead of trying to list everything here, we ask that you contact your Buick dealer in the area where you'll be parking your vehicle. The dealer can give you the best advice for that particular area.

## Automatic Transaxle

Your shift lever is located on the steering column.




There are several different positions for your shift lever.

**PARK (P):** This locks your front wheels. It's the best position to use when you start your engine because your vehicle can't move easily.

**⚠ CAUTION:**

**It is dangerous to get out of your vehicle if the shift lever is not fully in PARK (P) with the parking brake firmly set. Your vehicle can roll.**

**CAUTION: (Continued)**

**CAUTION: (Continued)**

**Don't leave your vehicle when the engine is running unless you have to. If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure your vehicle won't move, even when you're on fairly level ground, always set your parking brake and move the shift lever to PARK (P).**

**See "Shifting Into PARK (P)" in the Index. If you're pulling a trailer, see "Towing a Trailer" in the Index.**

**REVERSE (R):** Use this gear to back up.

**NOTICE:**

**Shifting to REVERSE (R) while your vehicle is moving forward could damage your transaxle. Shift to REVERSE (R) only after your vehicle is stopped.**

To rock your vehicle back and forth to get out of snow, ice or sand without damaging your transaxle, see "If You're Stuck: In Sand, Mud, Ice or Snow" in the Index.

**NEUTRAL (N):** In this position, your engine doesn't connect with the wheels. To restart when you're already moving, use NEUTRAL (N) only. Also, use NEUTRAL (N) when your vehicle is being towed.

**⚠ CAUTION:**

**Shifting out of PARK (P) or NEUTRAL (N) while your engine is "racing" (running at high speed) is dangerous. Unless your foot is firmly on the brake pedal, your vehicle could move very rapidly. You could lose control and hit people or objects. Don't shift out of PARK (P) or NEUTRAL (N) while your engine is racing.**

**NOTICE:**

**Damage to your transaxle caused by shifting out of PARK (P) or NEUTRAL (N) with the engine racing isn't covered by your warranty.**

**AUTOMATIC OVERDRIVE (Ⓓ):** If your automatic transaxle has automatic overdrive, this position is for normal driving. If you need more power for passing, and you're:

- Going less than 35 mph (56 km/h), push your accelerator pedal about halfway down.
- Going about 35 mph (56 km/h) or more, push the accelerator all the way down.

  You'll shift down to the next gear and have more power.

**THIRD GEAR (3 ):** If your automatic transaxle does not have Overdrive, this position is for normal driving, at all speeds, in most street and highway situations.

If your automatic transaxle has Overdrive, D is like Ⓓ, but you never go into Overdrive.

Here are some times you might choose D instead of Ⓓ:

- When driving on hilly, winding roads.
- When towing a trailer, so there is less shifting between gears.
- When going down a steep hill.

**SECOND GEAR (2):** This position gives you more power but lower fuel economy. You can use SECOND (2) on hills. It can help control your speed as you go down steep mountain roads, but then you would also want to use your brakes off and on.

## NOTICE:

**Don't drive in SECOND (2) for more than 5 miles (8 km), or at speeds over 55 mph (88 km/h), or you can damage your transaxle. Use OVERDRIVE Ⓓ DRIVE (D) (if your vehicle has Overdrive) as much as possible.**

**Don't shift into SECOND (2) unless you are going slower than 65 mph (105 km/h), or you can damage your engine.**

**FIRST GEAR (1):** This position gives you even more power (but lower fuel economy) than SECOND (2). You can use it on very steep hills, or in deep snow or mud. If the selector lever is put in FIRST (1), the transaxle won't shift into first gear until the vehicle is going slowly enough.

## NOTICE:

**If your front wheels can't rotate, don't try to drive. This might happen if you were stuck in very deep sand or mud or were up against a solid object. You could damage your transaxle.**

**Also, if you stop when going uphill, don't hold your vehicle there with only the accelerator pedal. This could overheat and damage the transaxle. Use your brakes to hold your vehicle in position on a hill.**

# Parking Brake

**To set the parking brake:** Hold the regular brake pedal down with your right foot. Push down the parking brake pedal with your left foot. If the ignition is on, the brake system warning light will come on.

**To release the parking brake:** Hold the regular brake pedal down. Pull the brake release lever.

The parking brake uses the brakes on the rear wheels.

## NOTICE:

**Driving with the parking brake on can cause your rear brakes to overheat. You may have to replace them, and you could also damage other parts of your vehicle.**

**If you are towing a trailer and are parking on any hill:** See "Towing a Trailer" in the Index. That section shows what to do first to keep the trailer from moving.

## Shifting Into PARK (P)

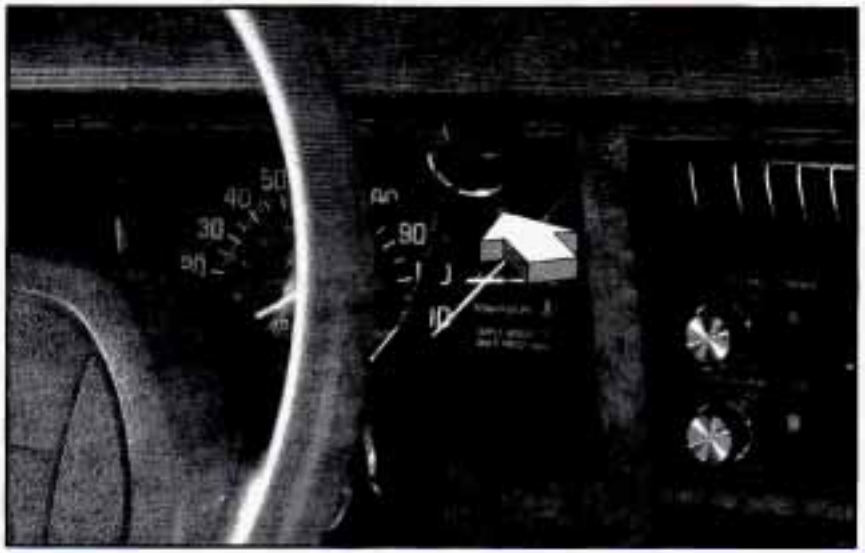
**⚠ CAUTION:**

**It can be dangerous to get out of your vehicle if the shift lever is not fully in PARK (P) with the parking brake firmly set. Your vehicle can roll.**

**If you have left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure your vehicle won't move, even when you're on fairly level ground, use the steps that follow. If you're pulling a trailer, see "Towing a Trailer" in the Index.**

1. Hold the brake pedal down with your right foot and set the parking brake.

2. Move the shift lever into PARK (P) position like this:
   - Pull the lever toward you.



- Move the lever up as far as it will go.

3. Move the ignition key to LOCK.
4. Remove the key and take it with you. If you can walk away from your vehicle with the ignition key in your hand, your vehicle is in PARK (P).

## Leaving Your Vehicle With the Engine Running

**⚠ CAUTION:**

**It can be dangerous to leave your vehicle with the engine running. Your vehicle could move suddenly if the shift lever is not fully in PARK (P) with the parking brake firmly set. And, if you leave the vehicle with the engine running, it could overheat and even catch fire. You or others could be injured. Don't leave your vehicle with the engine running unless you have to.**

If you have to leave your vehicle with the engine running, be sure your vehicle is in PARK (P) and your parking brake is firmly set before you leave it. After you've moved the shift lever into the PARK (P) position, hold the regular brake pedal down. Then, see if you can move the shift lever away from PARK (P) without first pulling it toward you. If you can, it means that the shift lever wasn't fully locked into PARK (P).

Note: If for some reason you leave your vehicle running and it is not in PARK (P) and the parking brake is applied, your doors will automatically lock when you close the door.

### Torque Lock

If you are parking on a hill and you don't shift your transaxle into PARK (P) properly, the weight of the vehicle may put too much force on the parking pawl in the transaxle. You may find it difficult to pull the shift lever out of PARK (P). This is called "torque lock." To prevent torque lock, set the parking brake and then shift into PARK (P) properly before you leave the driver's seat. To find out how, see "Shifting Into PARK (P)" in the Index.

When you are ready to drive, move the shift lever out of PARK (P) *before* you release the parking brake.

If "torque lock" does occur, you may need to have another vehicle push yours a little uphill to take some of the pressure from the transaxle, so you can pull the shift lever out of PARK (P).

## Shifting Out of PARK (P)

Your Buick has a brake transaxle shift interlock. You have to fully apply your regular brake to shift from PARK (P) when the ignition is in the RUN position. See "Automatic Transaxle" in the Index.

If you cannot shift out of PARK (P) ease pressure on the shift lever--push the shift lever all the way into PARK (P) as you maintain brake application. Then move the shift lever into the gear you want. If you ever hold the brake pedal down but still can't shift out of PARK (P) try this:

1. Turn the key to off.
2. Apply and hold the brake until the end of Step 4.
3. Shift to NEUTRAL (N).
4. Start the vehicle and then shift to the drive gear you want.
5. Have the vehicle fixed as soon as you can.

## Parking Over Things That Burn

**⚠ CAUTION:**

**Things that can burn could touch hot exhaust parts under your vehicle and ignite. Don't park over papers, leaves, dry grass or other things that can burn.**

## Engine Exhaust

**⚠ CAUTION:**

**Engine exhaust can kill. It contains the gas carbon monoxide (CO), which you can't see or smell. It can cause unconsciousness and death.**

**You might have exhaust coming in if:**

- **Your exhaust system sounds strange or different.**
- **Your vehicle gets rusty underneath.**
- **Your vehicle was damaged in a collision.**
- **Your vehicle was damaged when driving over high points on the road or over road debris.**
- **Repairs weren't done correctly.**
- **Your vehicle or exhaust system had been modified improperly.**

**If you ever suspect exhaust is coming into your vehicle:**

- **Drive it only with all the windows down to blow out any CO; and**
- **Have your vehicle fixed immediately.**

## Running Your Engine While You're Parked

It's better not to park with the engine running. But if you ever have to, here are some things to know.

**⚠ CAUTION:**

**Idling the engine with the air system control off could allow dangerous exhaust into your vehicle (see the earlier Caution under "Engine Exhaust").**

**Also, idling in a closed-in place can let deadly carbon monoxide (CO) into your vehicle even if the fan switch is at the highest setting. One place this can happen is a garage. Exhaust -- with CO -- can come in easily. NEVER park in a garage with the engine running.**

**Another closed-in place can be a blizzard. (See "Blizzard" in the Index.)**

**⚠ CAUTION:**

**It can be dangerous to get out of your vehicle if the shift lever is not fully in PARK (P) with the parking brake firmly set. Your vehicle can roll. Don't leave your vehicle when the engine is running unless you have to. If you've left the engine running, the vehicle can move suddenly. You or others could be injured. To be sure your vehicle won't move, even when you're on fairly level ground, always set your parking brake and move the shift lever to PARK (P).**

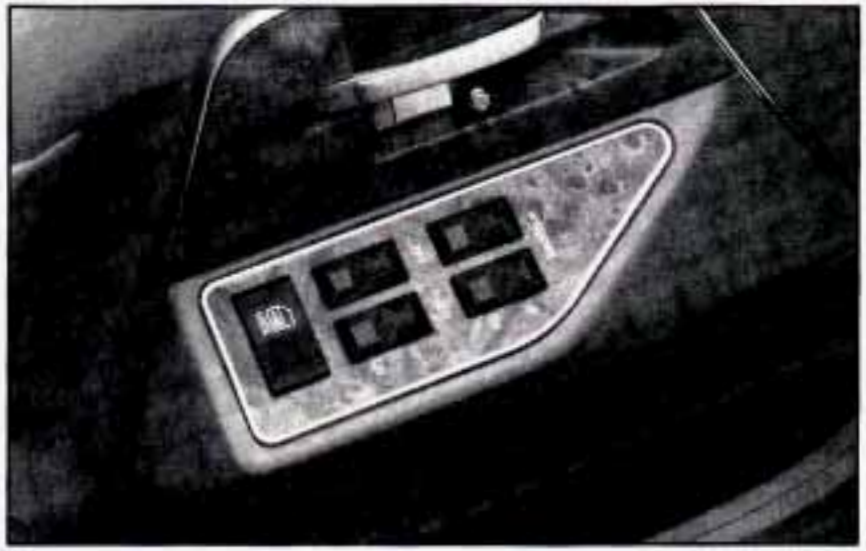
Follow the proper steps to be sure your vehicle won't move. See "Shifting Into PARK (P)" in the Index.

If you are parking on a hill and if you're pulling a trailer, also see "Towing a Trailer" in the Index.

## Windows

On a vehicle with manual windows, use the window crank to open and close each window.

## Power Windows (Option)



With power windows, switches on the driver's armrest control each of the windows when the ignition is on. In addition, each passenger door has a control switch for its own window.

## Wagon Rear Vent Windows (Option)

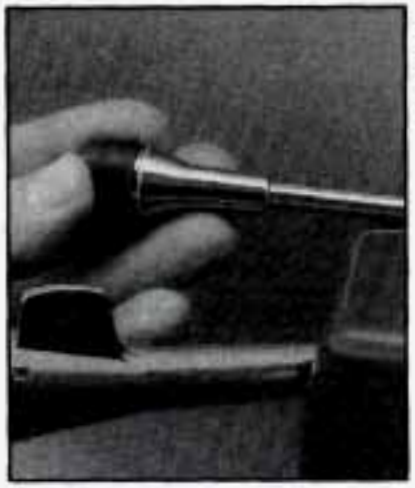
To open, pull the latch forward, then push on the center of the latch to swing the window out into the open position.

To close the window, pull the center of the latch and then press the latch into the closed position.

## Horn

You can sound the horn by pressing the horn symbol on your steering wheel.

## Tilt Wheel



A tilt steering wheel allows you to adjust the steering wheel before you drive.

You can also raise it to the highest level to give your legs more room when you exit and enter the vehicle.

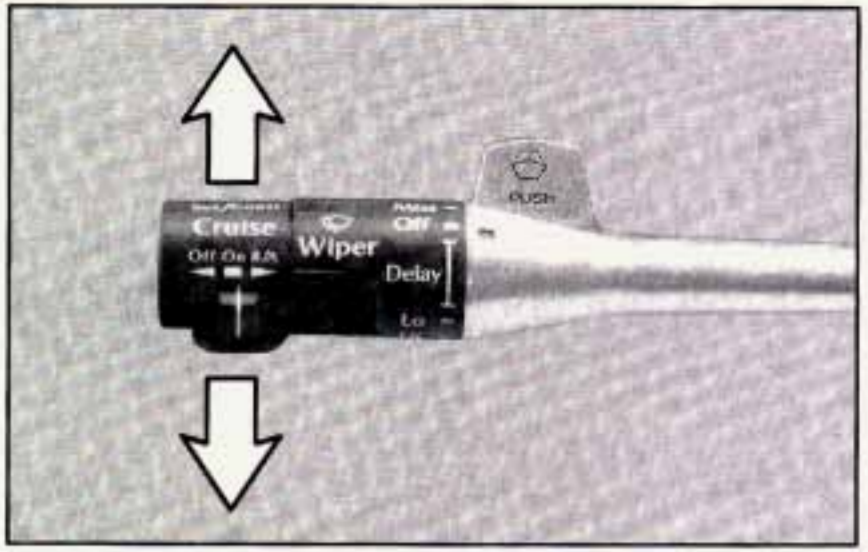
To tilt the wheel, hold the steering wheel and pull the lever. Move the steering wheel to a comfortable level, then release the lever to lock the wheel in place.

## Turn Signal/Headlamp Beam Lever

The lever on the left side of the steering column includes your:

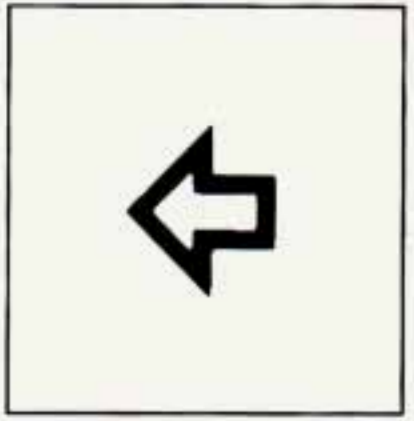
- Turn Signal and Lane Change Indicator
- Headlamp High-Low Beam & Passing Signal
- Windshield Wipers
- Windshield Washer
- Cruise Control (Option)

## Turn Signal and Lane Change Indicator




The turn signal has two upward (for right) and two downward (for left) positions. These positions allow you to signal a turn or a lane change.

To signal a turn, move the lever all the way up or down. When the turn is finished, the lever will return automatically.



A green arrow on the instrument panel will flash in the direction of the turn or lane change.

To signal a lane change, just raise or lower the lever until the green arrow starts to flash. Hold it there until you complete your lane change. The lever will return by itself when you release it.

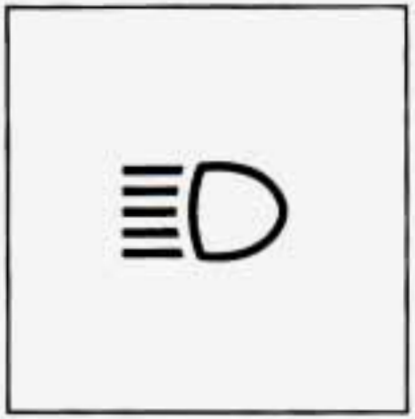
As you signal a turn or a lane change, if the arrows don't flash but just stay on, a signal bulb may be burned out and other drivers won't see your turn signal.

If a bulb is burned out, replace it to help avoid an accident. If the green arrows don't go on at all when you signal a turn, check the fuse (see "Fuses" in the Index) and for burned-out bulbs.

## Turn Signal Reminder

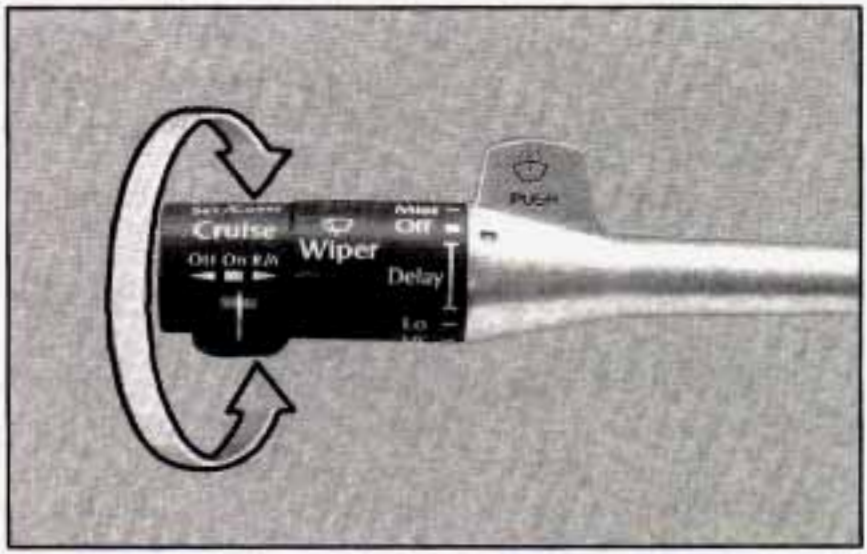
If your turn signal is left on for more than 3/4 of a mile, a chime will sound. To turn off the chime, move the turn signal lever to the off position.

## Headlamp High-Low Beam



To change the headlamps from low beam to high or high to low, pull the turn signal lever all the way toward you. Then release it. When the high beams are on, this blue light on the instrument panel also will be on.

# Windshield Wipers




You control the windshield wipers by turning the band marked WIPER.

For a single wiping cycle, turn the band to MIST. Hold it there until the wipers start, then let go. The wipers will stop after one cycle. If you want more cycles, hold the band on MIST longer.

You can set the wiper speed for a long or short delay between wipes. This can be very useful in light rain or snow. Turn the band to choose the delay time. The closer to LO, the shorter the delay.

For steady wiping at low speed, turn the band away from you to the LO position. For high speed wiping, turn the band further, to HI. To stop the wipers, move the band to OFF.

Remember that damaged wiper blades may prevent you from seeing well enough to drive safely. To avoid damage, be sure to clear ice and snow from the wiper blades before using them. If they're frozen to the windshield, carefully loosen or thaw them. If your blades do become damaged, get new blades or blade inserts.

Heavy snow or ice can overload your wiper motor. A circuit breaker will stop the motor until it cools. Clear away snow or ice to prevent an overload.

## Windshield Washer

At the top of the turn signal/headlamp beam lever there's a paddle with the word PUSH on it. To spray washer fluid on the windshield, push the paddle.

If you push the paddle less than one second, washer fluid will spray three to four times while the wiper blades cycle. If you push the paddle longer than one second, washer fluid will spray as long as the paddle is held. When you release the paddle, the wiper blades will cycle three to four more times to clear the window and then either stop or return to your preset speed.

Driving without washer fluid can be dangerous. A bad mud splash can block your vision. You could hit another vehicle or go off the road. Check your washer fluid level often.

**⚠ CAUTION:**

**In freezing weather, don't use your washer until the windshield is warmed. Otherwise the washer fluid can form ice on the windshield, blocking your vision.**

## NOTICE:

- **When using concentrated washer fluid, follow the manufacturer's instructions for adding water.**
- **Don't mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage your washer fluid tank and other parts of the washer system. Also, water doesn't clean as well as washer fluid.**
- **Fill your washer fluid tank only 3/4 full when it's very cold. This allows for expansion, which could damage the tank if it is completely full.**
- **Don't use radiator antifreeze in your windshield washer. It can damage your washer system and paint.**

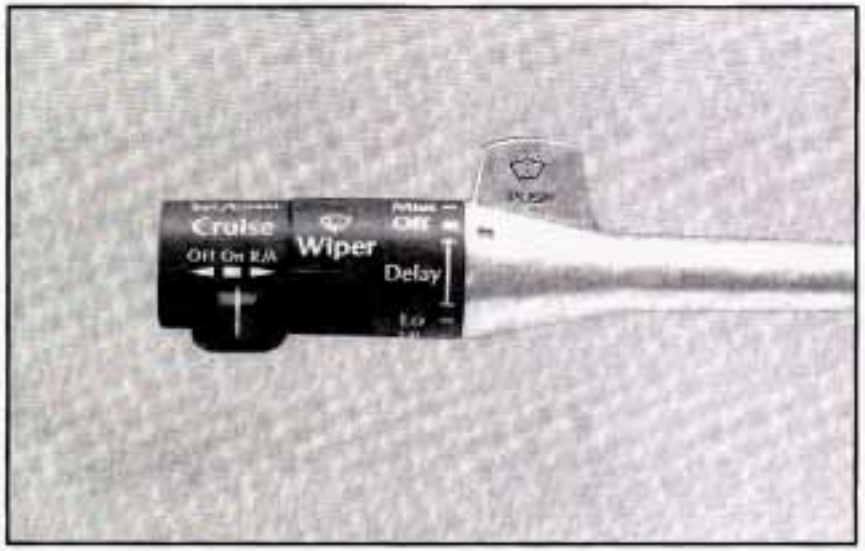
## Wagon Rear Window Washer/Wiper (Option)

The rear window washer/wiper switch is at the center of the instrument panel. Press the top of the switch labeled WASH and the rear wiper will run at a constant speed.

Press the switch further and hold to spray washer fluid while the wiper continues to run. The wiper will continue to run until you press the switch to OFF.

The rear window washer fluid reservoir is the same reservoir as the windshield washer reservoir.

# Cruise Control (Option)




With cruise control, you can maintain a speed of about 25 mph (40 km/h) or more without keeping your foot on the accelerator. This can really help on long trips. Cruise control does not work at speeds below about 25 mph (40 km/h).

When you apply your brakes, the cruise control shuts off.

**⚠ CAUTION:**

- **Cruise control can be dangerous where you can't drive safely at a steady speed. So, don't use your cruise control on winding roads or in heavy traffic.**
- **Cruise control can be dangerous on slippery roads. On such roads, fast changes in tire traction can cause needless wheel spinning, and you could lose control. Don't use cruise control on slippery roads.**

## To Set Cruise Control

1. Move the cruise control switch to ON.

> **⚠ CAUTION:**
>
> **If you leave your cruise control switch on when you're not using cruise, you might hit a button and go into cruise when you don't want to. You could be startled and even lose control. Keep the cruise control switch OFF until you want to use it.**

2. Get up to the speed you want.

3. Push in the SET button at the end of the lever and release it.

The CRUISE light on the instrument panel will come on.

4. Take your foot off the accelerator pedal.

## To Resume a Set Speed

Suppose you set your cruise control at a desired speed and then you apply the brake. This, of course, shuts off the cruise control. But you don't need to reset it.

Once you're going about 25 mph (40 km/h) or more, you can move the cruise control switch from ON to R/A (Resume/Accelerate) for about half a second. You'll go right back up to your chosen speed and stay there.

If you hold the switch at R/A longer than half a second, the vehicle will keep going faster until you release the switch or apply the brake. You could be startled and even lose control. So unless you want to go faster, don't hold the switch at R/A.

## To Increase Speed While Using Cruise Control

There are two ways to go to a higher speed. Here's the first:

1. Use the accelerator pedal to get to the higher speed.
2. Push the SET button at the end of the lever, then release the button and the accelerator pedal. You'll now cruise at the higher speed.

Here's the second way to go to a higher speed:

1. Move the cruise switch from ON to R/A. Hold it there until you get up to the speed you want, and then release the switch.
2. To increase your speed in very small amounts, move the switch to R/A for less than half a second and then release it. Each time you do this, your vehicle will go 1 mph (1.6 km/h) faster. If you tap R/A five times, you will go 5 mph faster.

   The accelerate feature will only work after you have set the cruise control speed by pushing the SET button.

## To Reduce Speed While Using Cruise Control

There are two ways to reduce your speed while using cruise control:

1. Push in the SET button at the end of the lever until you reach the lower speed you want, then release it.
2. To slow down in very small amounts, push the button for less than half a second. Each time you do this, you'll go 1 mph (1.6 km/h) slower. If you tap SET five times, you will go 5 mph slower.

## Passing Another Vehicle While Using Cruise Control

Use the accelerator pedal to increase your speed. When you take your foot off the pedal, your vehicle will slow down to the cruise control speed you set earlier.

## Using Cruise Control on Hills

How well your cruise control will work on hills depends upon your speed, load, and the steepness of the hills. When going up steep hills, you may have to step on the accelerator pedal to maintain your speed. When going downhill, you may have to brake or shift to a lower gear to keep your speed down. Of course, applying the brake takes you out of cruise control. Many drivers find this to be too much trouble and don't use cruise control on steep hills.

## To Get Out of Cruise Control

There are two ways to turn off the cruise control:

1. Step lightly on the brake pedal, or
2. Move the cruise switch to OFF.

## To Erase Speed Memory

When you turn off the cruise control or the ignition, your cruise control set speed memory is erased.

# Lamps

Theses switches control the following light systems:

- Headlamps
- Parking Lamps
- Side Marker Lamps
- Taillamps
- License Plate Lamps
- Instrument Panel Lamps

To turn on the headlamps, press the switch with the lamp symbol.

Press the switch marked P to turn on the parking lamps.

Press OFF to turn off all lamps.

## Interior/Instrument Panel Lamps

You can brighten or dim the instrument panel lamps by rotating the control up or down. To turn on the interior courtesy lamps, rotate the control all the way up to HI.

## Headlamp On Warning

If you open the door while leaving the lamps on, you will hear a warning chime.

## Daytime Running Lamps (Option)

Daytime Running Lamps (DRL) make it easier to see the front of your vehicle during the day. DRL can be helpful in many different driving conditions, but they can be especially helpful in the short periods after dawn and before sunset.

A light sensor in the instrument panel cluster makes the DRL work, so be sure it isn't covered.

The DRL system will make your headlamp low beams come on at reduced brightness when:

- the ignition is on,
- the headlamp switch is off, and
- the parking brake is released.

When the DRL are on, only your front headlamp low beams will be on. The taillamps, sidemarker and other lamps won't be on. Your instrument panel won't be lit up either.

When it's dark enough outside, your headlamps will come on to full brightness. The other lamps that come on with your headlamps will also come on.

When it's bright enough outside, the regular lamps will go off, and your headlamp low beams will come on at a reduced brightness.

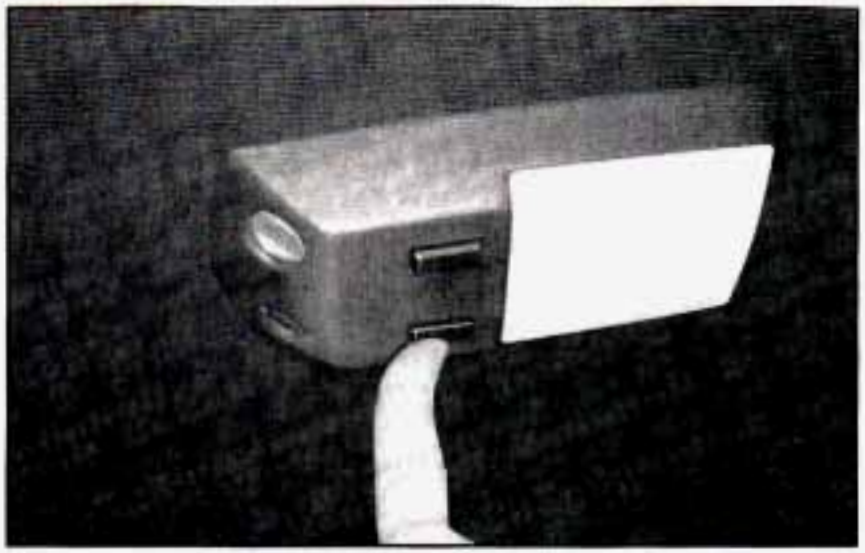
To idle your vehicle with the DRL off, set the parking brake while the ignition is in the OFF or LOCK position. Then start the vehicle. The DRL will stay off until you release the parking brake.

As with any vehicle, you should turn on the regular headlamp system any time you need it.

## Map Lamp

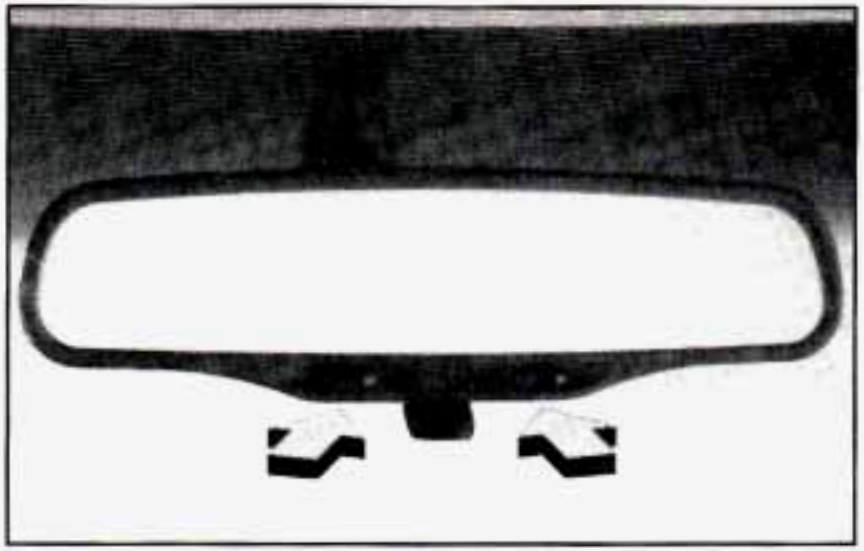
Press the switch to turn the map lamp on and off.

## Front Seat Reading Lamps (Option)



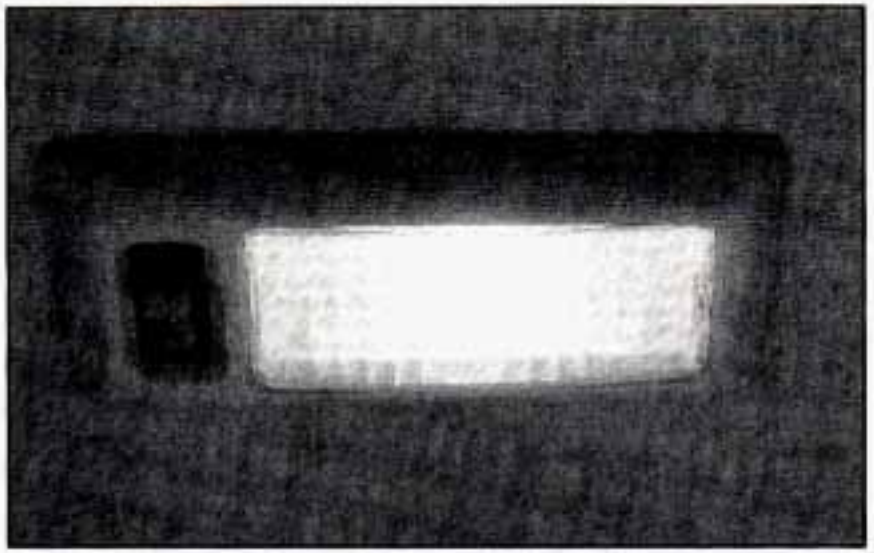
Press the switch to turn the front seat reading lamps on or off.

## Mirror Reading Lamps (Option)



Press the switches on the front of the mirror to turn on the reading lamps.

## Rear Reading Lamps (Wagon)



This lamp will go on when you open the liftgate. To turn on the lamp when the liftgate is closed, press the switch.

## Interior Lamps Delay

When you pull on the driver's outside door handle, the dome and courtesy lamps will go on and stay on for about 40 seconds, or until you turn the ignition on.

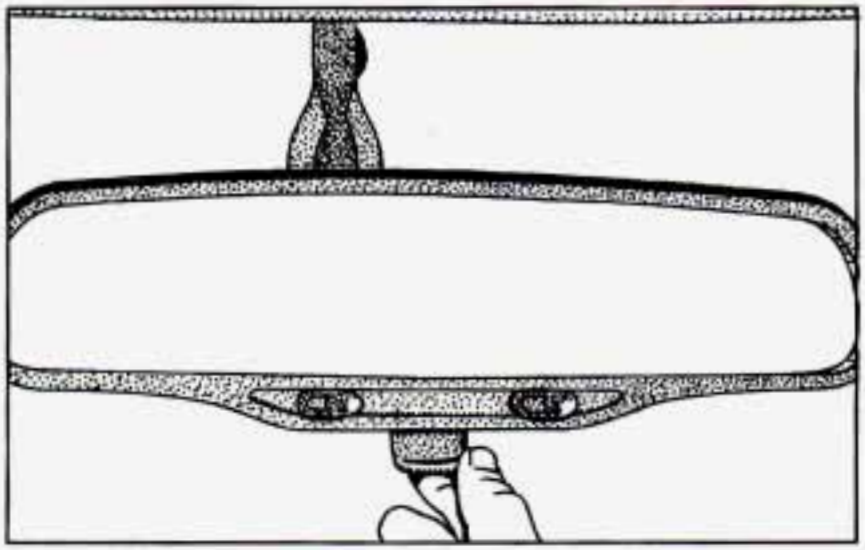
If you pull on the driver's inside door handle within 30 seconds of switching off the ignition, the interior lamps will go on and stay on for about 5 seconds, to allow you to unlock your door(s).

## Courtesy Lamps

When any door is opened, several lamps go on. These lamps are under the instrument panel. Optional lamps are on the front doors. They make it easy for you to enter and leave the vehicle. You also can turn these lamps on by rotating the interior lamps switch to HI.

# Mirrors

## Inside Mirror

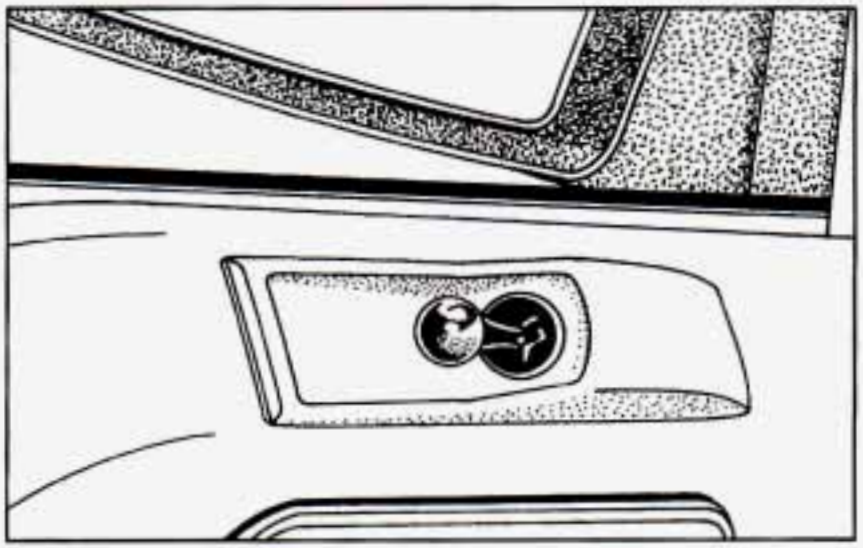


When you are sitting in a comfortable driving position, adjust the mirror so you can see clearly behind you car. The day-night adjustment allows you to reduce glare from lights behind you, pull the lever toward you to the night position.

# Outside Mirrors

## Manual

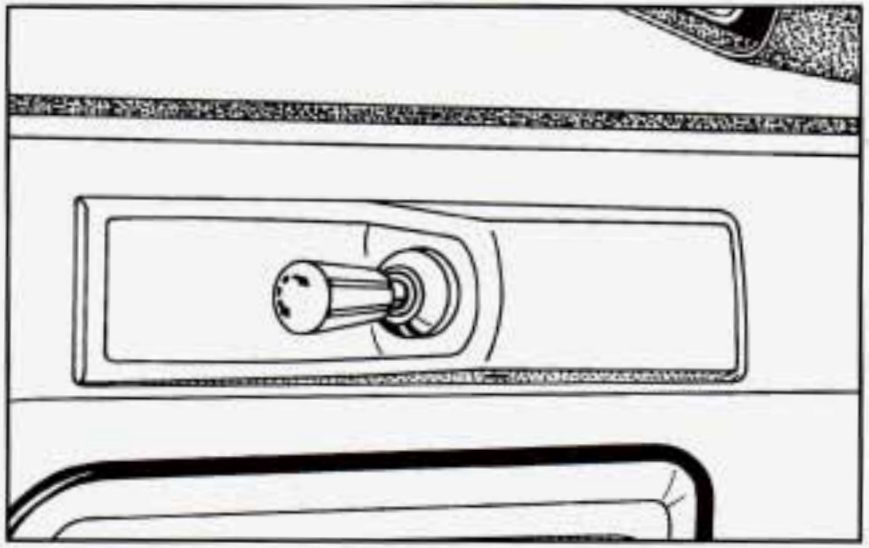
Both the driver and passenger side outside mirrors should be adjusted so that you just see the side of your vehicle and the area behind your vehicle when you are sitting in a comfortable driving position.



Use the remote control knob on the driver's door to adjust the driver's outside mirror. Adjust the passenger's outside mirror by hand.

## Power (Option)

Both the driver's and optional passenger side outside mirrors can be adjusted with the control lever on the driver's door.



Turn the knob left or right to select the driver's or passenger's mirror. Rotate the knob to adjust the mirror.

Adjust each mirror so that you can just see the side of your vehicle and the area behind your vehicle when you are sitting in a comfortable driving position.

## Convex Outside Mirror

Your passenger's side mirror is convex.

A convex mirror's surface is curved so you can see more from the driver's seat.

**⚠ CAUTION:**

**A convex mirror can make things (like other vehicles) look farther away than they really are. If you cut too sharply into the right lane, you could hit a vehicle on your right. Check your inside mirror or glance over your shoulder before changing lanes.**

## Convenience Net (Option)

Your vehicle may have a convenience net. You'll see it just inside the back wall of the trunk.

Put small loads, like grocery bags, behind the net. It can help keep them from falling over during sharp turns or quick starts and stops.

The net isn't for larger, heavier loads. Store them in the trunk as far forward as you can. You can unhook the net so that it will lie flat when you're not using it.

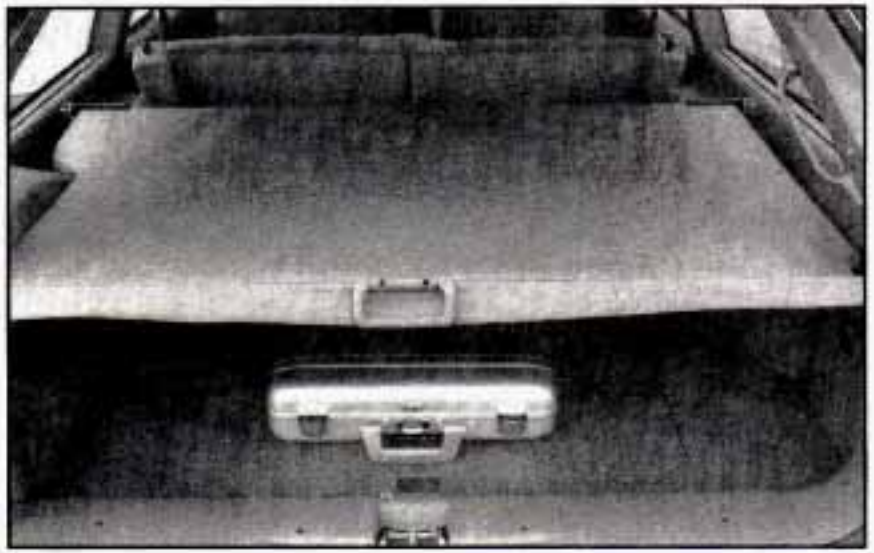
## Wagon Cargo Security Cover (Option)

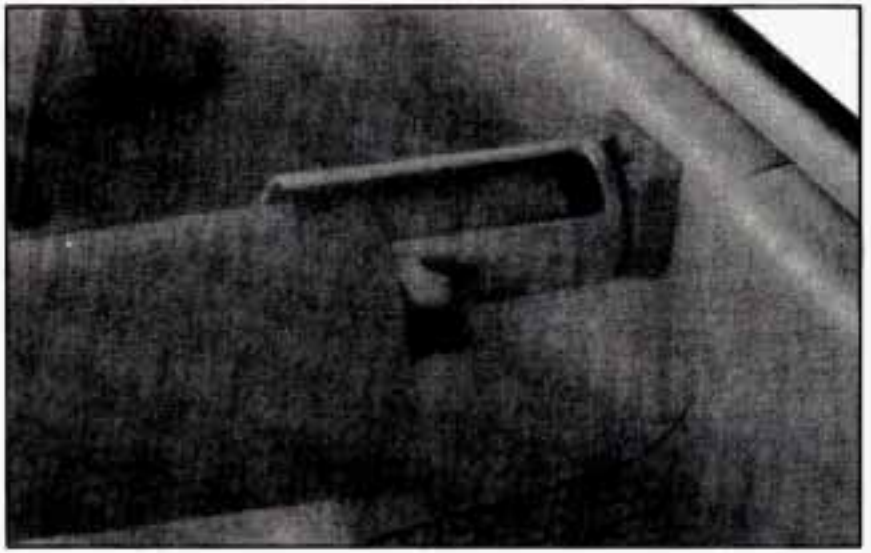
This cover is designed to help conceal articles in the rear storage area. It pulls out and retracts like a window shade.

If you have the optional rear-facing third seat, make sure it is folded down.

**⚠ CAUTION:**

**An improperly stored cargo cover could be thrown about the vehicle during a collision or sudden maneuver. You or others could be injured. If you remove the cover, always store it properly secured. When you put it back, always be sure that it is securely reattached.**





**To Use the Cover:** Grasp the handle and pull the cover over the rear storage area. Insert the ends of the support rod into the slots in the trim panel near the liftgate.

When the cover isn't in use, roll it back onto the roller. Hold the handle and lift the support rod out of the slots. Tug the cover lightly, then let it roll back automatically. Don't release the handle until the cover has rolled back completely.

**To Remove the Cover:** You can remove the cover and roller assembly for extra cargo room. Slide back the end sleeve and lift the assembly out of the notch in the trim panel.

To replace the assembly, reverse the procedure.

## Luggage Carrier (Option)

If you have the optional luggage carrier, you can load things on top of a wagon. The wagon has slats attached to the roof, side rails, and adjustable crossrails. The crossrails can be adjusted by loosening the screws. After moving the crossrails, be sure to tighten the screws securely.

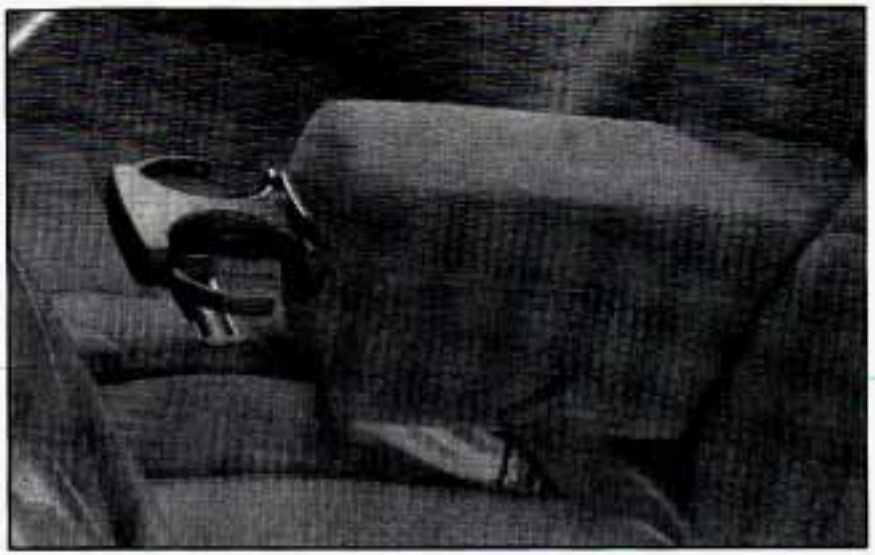
Don't exceed the maximum vehicle capacity when loading your Buick. For more information on vehicle capacity and loading, see "Loading Your Vehicle" in the Index.

To prevent damage or loss of cargo as you're driving, check now and then to make sure the luggage carrier and cargo are still securely fastened.

### NOTICE:

**Loading cargo that weighs more than 200 pounds (90 kg) for the roof on the luggage carrier may damage your vehicle. When you carry large things, never let them hang over the rear or the sides of your vehicle. Load your cargo so that it rests on the slats and does not scratch or damage the vehicle. Put the cargo against the rear rail of the deck lid carrier and fasten it securely. On the wagon, put the cargo against the side rails of the roof carrier and fasten it securely.**

## Storage Armrest (Option)

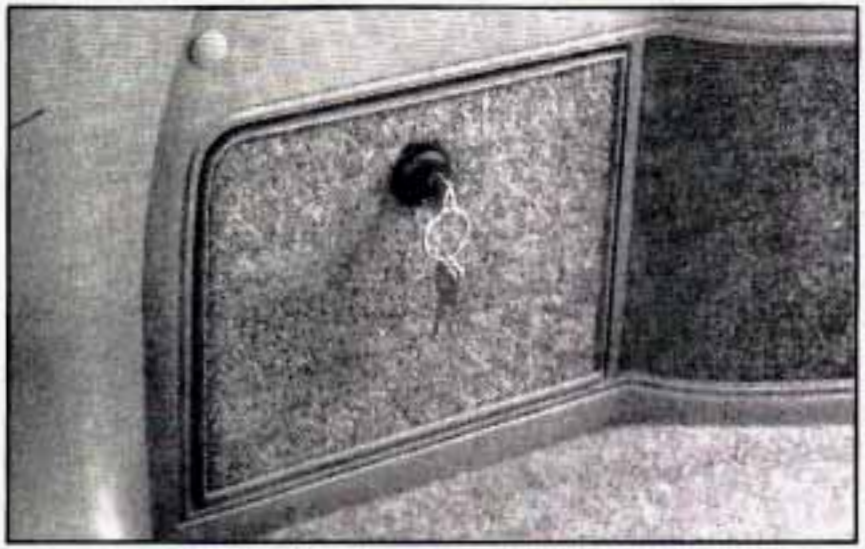


The front armrest opens into a storage area. To open it, lift the lever at the front edge. Inside is a coin holder, slots to hold cassettes or CDs and a dual cup holder. To use the cup holder, flip it forward and close the armrest cover.

The cup holder can be removed for cleaning. Flip the cup holder into the armrest storage area. Squeeze the arms inward to release the retainer pins. Remove the cup holder.

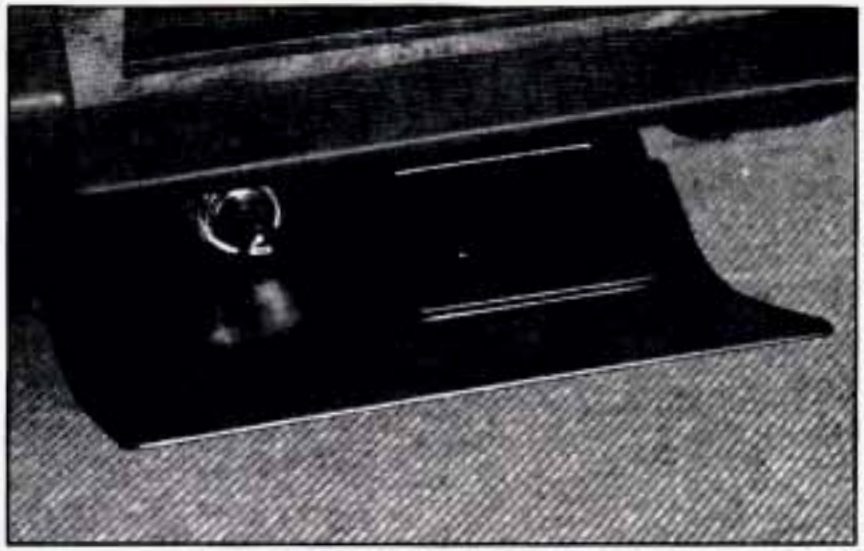
The armrest can be raised so that a passenger can sit in the center position.

## Rear Locking Storage Compartment (Wagon)

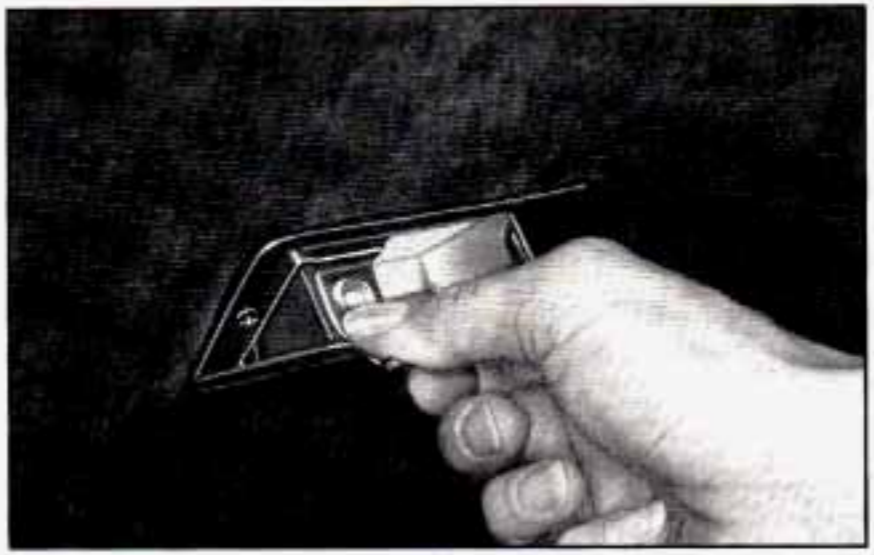


Use your door key to unlock the storage bin on the driver's side near the liftgate.

## Ashtrays



Reach under the front edge of the ashtray compartment to open it. To remove the ashtray for cleaning, reach under the ashtray and push up from behind it.



To clean the rear ashtrays, fully open the ashtray. Press down on the snuffer as you pull the ashtray down and out.

**NOTICE:**

**Don't put papers and other things that burn into ashtrays. If you do, cigarettes or other smoking materials could set them on fire, causing damage.**

## Cigarette Lighter

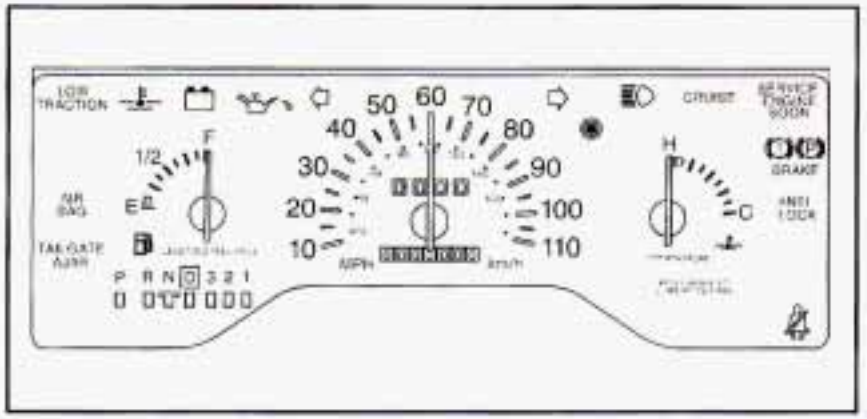
To use the lighter, push it in all the way and let go. When it's ready, it will pop back by itself.

**NOTICE:**

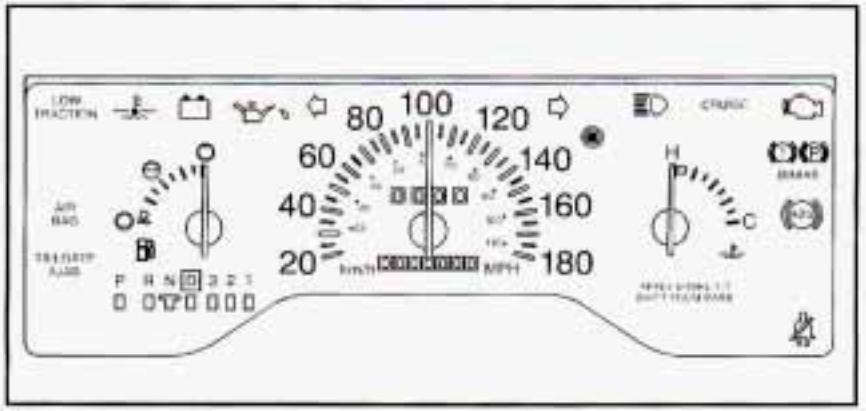
**Don't hold a cigarette lighter in with your hand while it is heating. If you do, it won't be able to back away from the heating element when it's ready. That can make it overheat, damaging the lighter and the heating element.**

# The Instrument Panel: Your Information System

**Domestic**




**Canadian**




Your instrument panel is designed to let you know at a glance how your vehicle is running. You'll know how fast you're going, how much fuel you're using, and many other things you'll need to drive safely and economically.

## Speedometer and Odometer

Your speedometer lets you see your speed in both miles per hour (mph) and kilometers per hour (km/h). Your odometer shows how far your vehicle has been driven, in either miles (used in the U.S.) or kilometers (used in Canada).

Your Buick has a "tamper-resistant odometer." If you can see very noticeable bright silver lines between the numbers, probably someone has tried to turn it back. The numbers may not be true.

You may wonder what happens if a vehicle has to have a new odometer installed. If possible, the new one has to be set to the same reading as the old one. If it can't be, then it's set at zero, and a label on the driver's door must show the old reading and when the new one was installed.

## Trip Odometer

The trip odometer can tell you how many miles you have driven since you last set it to zero. To reset it, push the button on the instrument cluster.

# Warning Lights, Gages and Indicators

This part describes warning lights and gages that may be on your vehicle. The pictures will help you locate them.

Warning lights and gages can signal that something is wrong before it becomes serious enough to cause an expensive repair or replacement. Paying attention to your warning lights and gages could also save you or others from injury.

Warning lights come on when there may be or is a problem with one of your vehicle's functions. As you will see in the details on the next few pages, some warning lights come on briefly when you start the engine just to let you know they're working. If you are familiar with this section, you should not be alarmed when this happens.

Gages can indicate when there may be or is a problem with one of your vehicle's functions. Often gages and warning lights work together to let you know when there's a problem with your vehicle.

When one of the warning lights comes on and stays on when you are driving, or when one of the gages shows there may be a problem, check the section that tells you what to do about it. Please follow this manual's advice. Waiting to do repairs can be costly -- and even dangerous. So please get to know your warning lights and gages. They're a big help.

## Safety Belt Warning Light

When the key is turned to RUN or START a chime will come on for about eight seconds to remind people to fasten their safety belts, unless the driver's safety belt is already buckled. The safety belt light will also come on and stay on for about 20 seconds, then it will flash for about 55 seconds. If the driver's belt is already buckled, neither the chime nor the light will come on.

**⚠ CAUTION:**

**If your safety belt light ever comes on or stays on after the front doors are closed and the driver's belt is buckled, have your vehicle fixed.**

**If you don't, the belt might not work as it should, and you might not have the protection you'd need in a crash.**

## Air Bag Readiness Light

There is an air bag readiness light on the instrument panel, which shows AIR BAG . The system checks the air bag's electrical system for malfunctions. The light tells you if there is an electrical problem. The system check includes the air bag sensors and the wiring and the diagnostic module. For more information on the air bag system, see "Air Bag" in the Index.

You will see this light flash for a few seconds when you turn your ignition to RUN or START. Then the light should go out. This means the system is ready.

If the air bag readiness light doesn't come on when you start your vehicle, or stays on, or comes on when you are driving, your air bag system may not work properly. Have your vehicle serviced right away.

## Brake System Warning Light

Your Buick's hydraulic brake system is divided into two parts. If one part isn't working, the other part can still work and stop you. For good braking, though, you need both parts working well.

If the warning light comes on, there could be a brake problem. Have your brake system inspected right away.

This light should come on briefly as you start the vehicle. If it doesn't come on then, have it fixed so it will be ready to warn you if there's a problem.

If the light comes on while you are driving, pull off the road and stop carefully. You may notice that the pedal is harder to push. Or, the pedal may go closer to the floor. It may take longer to stop. If the light is still on, or if the anti-lock brake system warning light is flashing, have the vehicle towed for service. (See "Anti-Lock Brake System Warning Light" and "Towing Your Car" in the Index.)

**⚠ CAUTION:**

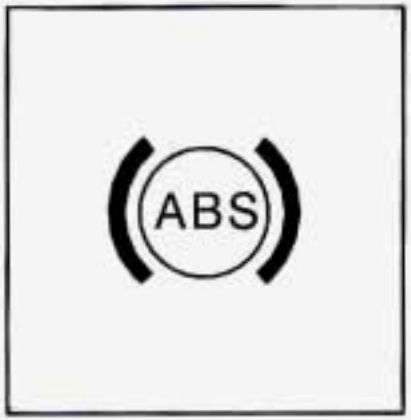
**Your brake system may not be working properly if the brake system warning light is on. Driving with the brake system warning light on can lead to an accident. If the light is still on or if the anti-lock brake system warning light is flashing after you've pulled off the road and stopped carefully, have the vehicle towed for service.**

The brake system warning light will also come on when you set your parking brake, and it will stay on if your parking brake doesn't release fully. If it stays on after your parking brake is fully released, it means you have a brake problem.

## Anti-Lock Brake System Warning Light

**Domestic**

**Canadian**




With the anti-lock brake system, this light will come on when you start your engine and it will stay on for three seconds. That's normal. If the light doesn't come on, have it fixed so it will be ready to warn you if there is a problem.

If the light flashes when you're driving, you don't have anti-lock brakes and there could be a problem with your regular brakes. Pull off the road and stop carefully. You may notice that the pedal is harder to push. Or, the pedal may go closer to the floor. It may take longer to stop. Have the vehicle towed for service. (See "Towing Your Car" in the Index.)

**⚠ CAUTION:**

**Your regular brake system may not be working properly if the anti-lock brake system warning light is flashing. Driving with the anti-lock brake system warning light flashing can lead to an accident. After you've pulled off the road and stopped carefully, have the vehicle towed for service.**

If the anti-lock brake system warning light stays on longer than normal after you've started your engine, turn the ignition off. Or, if the light comes on and stays on when you're driving, stop as soon as possible and turn the ignition off. Then start the engine again to reset the system. If the light still stays on, or comes on again while you're driving, your Buick needs service. If the light is on but not flashing and the regular brake system warning light isn't on, you still have brakes, but you don't have anti-lock brakes.

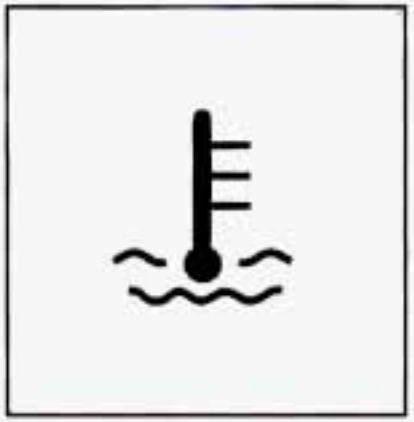
## Anti-Lock Brake System Active Light

When your anti-lock system is adjusting brake pressure to help avoid a braking skid, the LOW TRACTION light will come on.

Slippery road conditions will exist if this light comes on, so adjust your driving accordingly. The light will stay on for a few seconds after the system stops adjusting brake pressure.

The LOW TRACTION light also comes on briefly, as a bulb check, when the engine is started. If the light doesn't come on then, have it fixed so it will be there to tell you when the system is active.

## Engine Coolant Temperature Warning Light



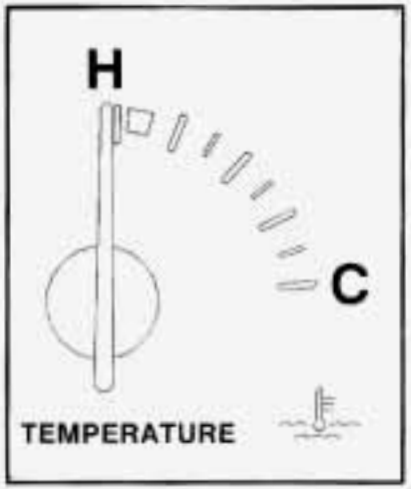
This red warning light is designed to tell you that your engine coolant has overheated or your radiator cooling fan is not working.

If you have been operating your vehicle under normal driving conditions, you should pull off the road, stop your vehicle and turn the engine off as soon as possible.

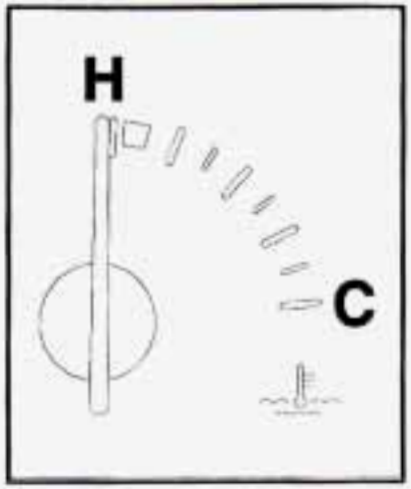
The chapter "Problems on the Road," in this manual explains what to do. See "Engine Overheating" in the Index.

## Engine Coolant Temperature Gage

**Domestic**




**Canadian**




This gage shows the engine coolant temperature. If the gage pointer moves into the red area, your engine is too hot!

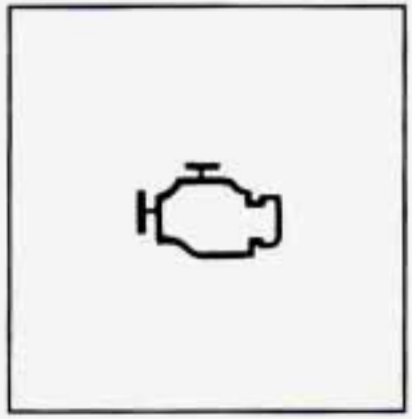
That reading means the same thing as the warning light. It means that your engine coolant has overheated. If you have been operating your vehicle under normal driving conditions, you should pull off the road, stop your vehicle and turn off the engine as soon as possible.

The chapter "Problems on the Road," in this manual explains what to do. See "Engine Overheating" in the Index.

## Malfunction Indicator Lamp (Service Engine Soon Light)

**Domestic**

**Canadian**



Your vehicle is equipped with either an amber SERVICE ENGINE SOON light or an amber engine symbol light.

A computer monitors operation of your fuel, ignition and emission control systems. This reminder light is designed to come on when the ignition is on, but the engine is not running, as a check to show you it is working.

If it does not come on at all, have it fixed right away. If it stays on, or it comes on while you are driving, the computer is indicating that you have a problem. You should take your vehicle in for service soon.

## NOTICE:

**If you keep driving your vehicle with this light on, after a while the emission controls won't work as well, your fuel economy won't be as good and your engine may not run as smoothly. This could lead to costly repairs not covered by your warranty.**

## Liftgate Ajar Warning Light (Wagon)

The amber TAILGATE AJAR reminder light on your instrument panel will come on if your liftgate is not completely closed.

## Engine Oil Pressure Light

If you have a problem with your oil, this red oil pressure warning light may stay on after you start your engine, or come on when you are driving. Stop your vehicle and shut off the engine if this light stays on.

This indicates that oil is not going through your engine quickly enough to keep it lubricated.

The engine could be low on oil, or could have some other oil problem. Have your vehicle serviced immediately.

The oil light could also come on in three other situations:

- When the ignition is on but the engine is not running, the light will come on as a test to show you it is working, but the light will go out when you turn the ignition to "Start." If it doesn't come on with the ignition on, you may have a problem with the fuse or bulb. Have it fixed right away.

- Sometimes when the engine is idling at a stop, the light may blink on and off. This is normal.
- If you make a hard stop, the light may come on for a moment. This is normal.

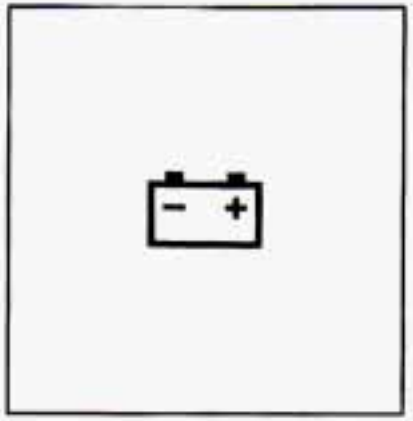
**⚠ CAUTION:**

**Don't keep driving if the oil pressure is low. If you do, your engine can become so hot that it catches fire. You or others could be burned. Check your oil as soon as possible and have your vehicle serviced.**

**NOTICE:**

**Damage to your engine from neglected oil problems can be costly and is not covered by your warranty.**

## Battery Light



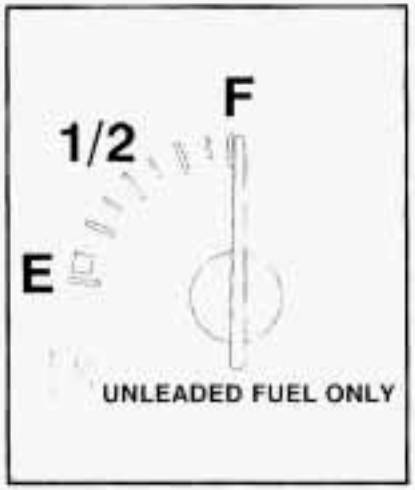
The red battery warning light is designed to come on briefly when you turn on the ignition, but the engine is not running, as a check to show you it is working.

Then it should go out. If it stays on, or comes on while you are driving, you may have a problem with the electrical charging system. It could indicate that you have a loose generator drive belt or another electrical problem. Have it checked right away. Driving while this light is on could drain your battery.

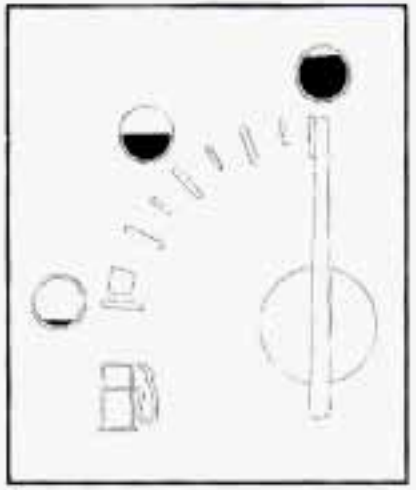
If you must drive a short distance with the light on, be certain to turn off all your accessories, such as the radio and air conditioner.

## Fuel Gage

**Domestic**




**Canadian**



Your fuel gage tells you about how much fuel you have left, when the ignition is on. When the indicator nears EMPTY (E), you still have a little fuel left, but you should get more soon.

Here are four things that some owners ask about. None of these show a problem with your fuel gage and are normal operating characteristics:

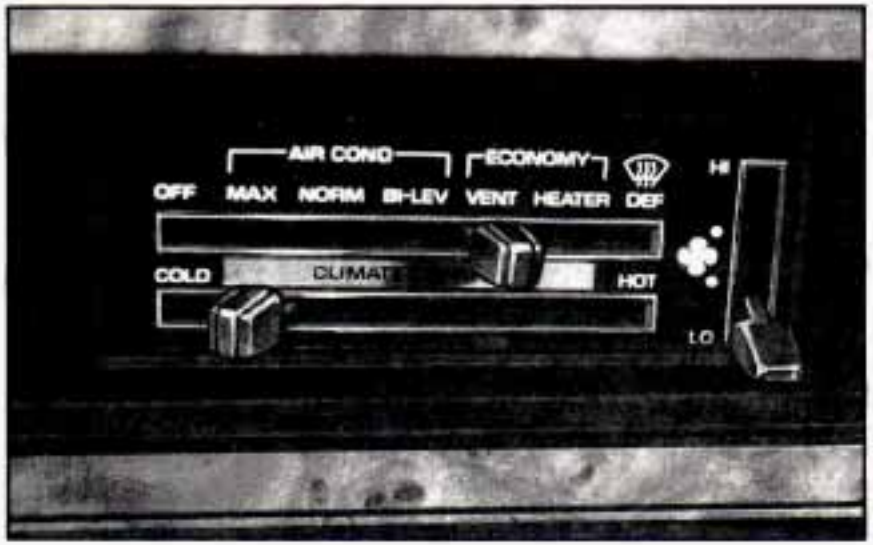
- At the service station, the gas pump shuts off before the gage reads FULL (F).
- It takes a little more or less fuel to fill up than the gage indicated. For example, the gage may have indicated the tank was half full, but it actually took a little more or less than half the tank's capacity to fill the tank.
- The gage moves a little when you turn a corner, speed up or brake.
- The gage doesn't go back to E when you turn off the ignition.

## NOTES

# Section 3 Comfort Controls and Audio Systems

In this section you'll find out how to operate the comfort control systems and audio systems offered with your Buick. Be sure to read about the particular system supplied with your vehicle.

## Your Buick Comfort Control System




The air conditioner and heater work best if you keep your windows closed while using them. Your vehicle also has the flow-through ventilation system described later in this section.

**Lever Controls:** The upper lever changes the functions of your system. The lower lever changes the temperature of the air coming through the system.

The lever next to the fan symbol selects the force of air you want.

To turn the fan off, move the upper lever to the OFF position.

### Air Conditioning

The upper lever has three air conditioner settings. On very hot days, open the windows long enough to let hot inside air escape. This reduces the amount of work your air conditioner's compressor will have to do, which should help fuel economy.

**MAX:** Provides maximum cooling with the least amount of work. This setting recirculates much of the air inside your vehicle so it maximizes your air conditioner's performance and fuel economy.

**NORM (Normal):** Use for normal cooling on hot days. This setting cools outside air and directs it through the instrument panel outlets.

**BI-LEV (Bi-Level):** Use this on cool, but sunny days. This setting brings in the outside air, and directs it in two ways. The cool air is directed to the upper portion of your body through the instrument panel outlets, and warmed air is directed through the heater ducts and defroster vents. At times this temperature difference may be more apparent than others.

The air conditioner compressor operates in all Air Conditioning positions, and in DEF (defrost) when the outside temperature is above about 40°F (4.5°C).

## Ventilation System

**VENT:** For mild outside temperatures, when little heating or cooling is needed, slide the upper lever to VENT. Air flow is through the instrument panel outlets. Rotate the control next to the outlets to turn on, adjust or turn off the air flow. Adjust the lower lever on the control panel to the temperature desired.

**HEATER:** When outside temperatures are cold, sliding the upper lever to HEATER and the lower lever to HOT will send heated air through the heater ducts, and some through the defroster vents. VENT and HEATER are labeled ECONOMY positions because the air conditioner compressor doesn't run in these two settings. This reduces engine load, resulting in improved fuel economy. If either setting fails to keep you comfortable, or causes your windows to fog up, slide the upper lever to one of the Air Conditioning positions, or to DEF (Defrost).

## Defrosting

The DEF setting directs most of the air through the defroster vents, and some through the heater ducts.

## Defogging

To quickly defog the windshield, set the upper lever to DEF and move the fan switch to HI. Slide the lower lever to HOT.

In damp, cool weather (temperatures about 45°-65°F, 7°-18°C), you can use BI-LEV to defog the side windows. Set the upper lever to BI-LEV and the fan switch to HI. Aim the side vents toward the side windows. For increased air flow to the side vents, close the center vents.

## Rear Window Defogger (Option)

The rear window defogger uses a warming grid to remove fog from the rear window. In winter, it can also keep ice from forming on the rear window.

Press the ON portion of the switch. The indicator light will glow. The rear window defogger will turn off automatically after about 10 minutes of use. You can also turn it off by turning off the ignition or pressing the OFF portion of the switch.

**NOTICE:**

**Don't use a razor blade or something else sharp on the inside of the rear window. If you do, you could cut or damage the warming grid, and the repairs wouldn't be covered by your warranty.**

## Flow-Through Ventilation System

Your Buick's flow-through ventilation system supplies outside air into the vehicle when it is moving. Outside air will also enter the vehicle when the heater or the air conditioning fan is running.

### Ventilation Tips

- Keep the hood and front air inlet free of ice, snow, or any other obstruction (such as leaves). The heater and defroster will work far better, reducing the chance of fogging the inside of your windows.
- When you enter a vehicle in cold weather, turn the blower fan to HI for a few moments before driving off. This helps clear the intake ducts of snow and moisture, and reduces the chance of fogging the inside of your windows.
- Keep the air path under the front seats clear of objects. This helps air to circulate throughout your vehicle.

# Audio Systems

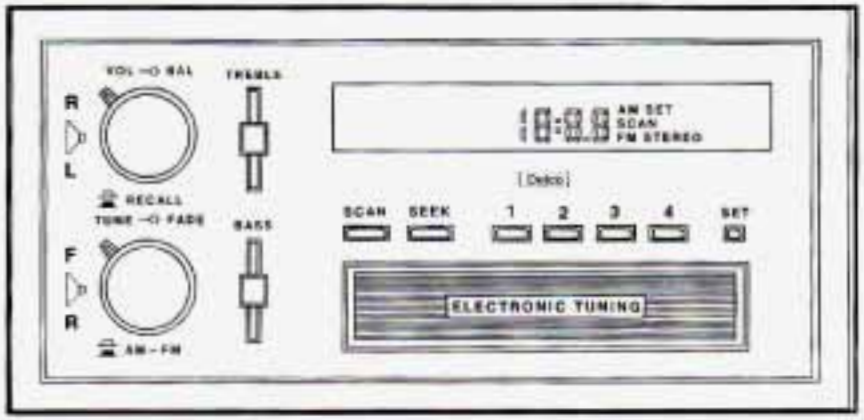
Your Delco® audio system has been designed to operate easily and give years of listening pleasure. But you will get the most enjoyment out of it if you acquaint yourself with it first. Find out what your Delco® system can do and how to operate all its controls, to be sure you're getting the most out of the advanced engineering that went into it.

## Clock

To set the clock:

1. Press the SET button.
2. Within 5 seconds, press and hold SCAN until the correct hour appears on the display.
3. Press and hold SEEK until the correct minute appears on the display.

## AM/FM Stereo Radio




The digital display indicates information on time or radio station frequency, the AM or FM radio band, whether the station is in stereo, and other radio functions.

**VOL:** Rotate the upper knob to turn the radio's power on and off and control the volume. When the ignition is off, press the knob to display the time.

**BAL:** The balance control behind the upper knob adjusts the left/right speaker balance.

**AM-FM:** Rotate the lower knob to tune in radio stations. Press it to change between the AM and FM bands.

**FADE:** The FADE control behind the lower knob adjusts the front/rear speaker balance.

**TREBLE:** Slide this lever up to increase treble, or down to decrease it. If a station is weak or noisy, reduce the treble.

**BASS:** Slide this lever up to increase bass, or down to decrease it.

**SCAN:** Press the SCAN button to hear each station for a few seconds. Push it again to stop scanning.

**SEEK:** Press the SEEK button to go to the next higher station and stay there. Push it again and it will find the next higher station.

**Pushbuttons**

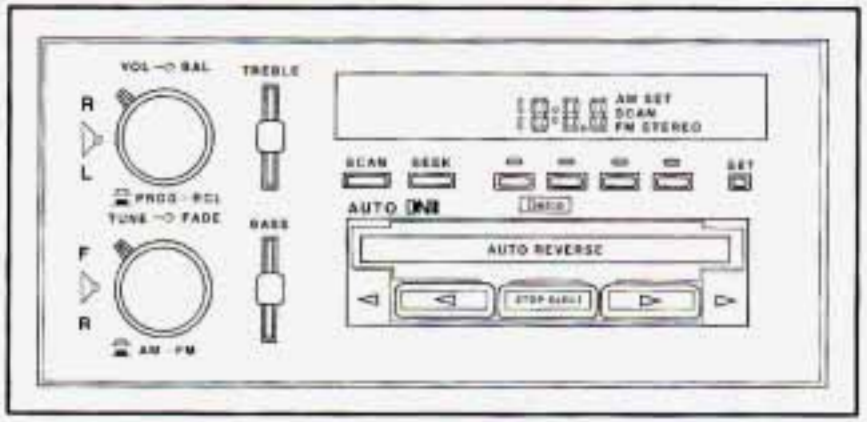
The four pushbuttons let you return to favorite stations. To set the pushbuttons for up to fourteen stations (7 AM and 7 FM):

1. Use the lower knob (TUNE) to tune in the station you want.
2. Press SET. The SET indicator will appear in the display.
3. Within 5 seconds, press one of the four pushbuttons. Whenever you push that button again, the preset station will return.

Up to three more stations may be preset on each band by pressing two pushbuttons that are next to each other, at the same time.

1. Tune in the desired station.
2. Press SET, and within five seconds press any two pushbuttons that are next to each other at the same time. The station will return when the same two pushbuttons are pressed again.

## AM/FM Stereo with Cassette Player




The digital display indicates information on time or radio station frequency, the AM or FM radio band, whether the station is in stereo, and other radio functions.

**VOL:** Rotate the upper knob to turn the radio's power on and off and control the volume. When the ignition is off, press the knob to display the time.

- Rotate VOL to control the volume.
- When the ignition is off, press the knob to display the time.
- When a tape is playing, press the knob to hear the other side of the tape.

**BAL:** The balance control behind the upper knob adjusts the left/right speaker balance.

**AM-FM:** Rotate the lower knob to tune in radio stations. Press it to change between the AM and FM bands.

**FADE:** The FADE control behind the lower knob adjusts the front/rear speaker balance.

**TREBLE:** Slide this lever up to increase treble, or down to decrease it. If a station is weak or noisy, reduce the treble.

**BASS:** Slide this lever up to increase bass, or down to decrease it.

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Up to three more stations may be preset on each band by pressing two pushbuttons that are next to each other, at the same time.

1. Tune in the desired station.
2. Press SET, and within five seconds press any two pushbuttons that are next to each other at the same time. The station will return when the same two pushbuttons are pressed again.

**DNR**®: Press the DNR® button to select the Dynamic Noise Reduction system that reduces background hiss on AM and FM radio broadcasts, as well as on cassette tapes. You may want to leave it pushed in all the time.

## To Play a Cassette Tape

With the power switch on, insert a tape into the cassette door. Using tapes that are longer than 90 minutes (45 minutes on each side) is not recommended.

When the right indicator arrow is lit, selections listed on the bottom side of the cassette are playing. When the left arrow is lit, selections listed on the top side of the cassette are playing. To change sides of the tape, press the upper control knob (VOL ) while the cassette is playing. The tape player automatically begins playing the other side when it reaches the end of the tape.

### Fast Forward

To rapidly advance the tape, press the button with the arrow pointing in the same direction the tape is playing. To stop fast forward, lightly press the STOP-EJECT button.

### Reverse

To rapidly reverse the tape, press the button with the arrow pointing in the opposite direction the tape is playing. To stop reverse, lightly press the STOP-EJECT button.

**STOP - EJECT:** To stop playing a tape, fully press this button. The cassette will eject, and the radio will begin playing.

# Understanding Radio Reception

## FM Stereo

FM stereo will give you the best sound. But FM signals will reach only about 10 to 40 miles (16 to 65 km). Tall buildings or hills can interfere with FM signals, causing the sound to come and go.

## AM

The range for most AM stations is greater than for FM, especially at night. The longer range, however, can cause stations to interfere with each other. AM can also pick up noise from things like storms and power lines. Try reducing the treble to lower this noise.

Be aware that hearing damage from loud noise is almost undetectable until it is too late. Your hearing can adapt to higher volumes of sound. Sound that seems normal can be loud and harmful to your hearing. Take precautions by adjusting the volume control on your radio to a safe sound level before your hearing adapts to it.

To help avoid hearing loss or damage:

- Adjust the volume control to the lowest setting.
- Increase volume slowly until you hear comfortably and clearly.

**NOTICE:**

**Before you add any sound equipment to your vehicle -- like a tape player, CB radio, mobile telephone or two-way radio -- be sure you can add what you want. If you can, it's very important to do it properly. Added sound equipment may interfere with the operation of your vehicle's engine, Delco® radio or other systems, and even damage them. And, your vehicle's systems may interfere with the operation of sound equipment that has been added improperly.**

**So, before adding sound equipment, check with your dealer and be sure to check Federal rules covering mobile radio and telephone units.**

## Care of Your Cassette Tape Player

A tape player that is not cleaned regularly can cause reduced sound quality, ruined cassettes, or a damaged mechanism. Cassette tapes should be stored in their cases away from contaminants, direct sunlight, and extreme heat. If they aren't, they may not operate properly or cause failure of the tape player.

Your tape player should be cleaned regularly each month or after every 50 hours of use. If you notice a reduction in sound quality, try a known good cassette to see if the tape or the tape player is at fault. If this other cassette has no improvement in sound quality, clean the tape player.

Proper cleaning may be done with a scrubbing action, non-abrasive cleaning cassette. This system uses a cleaning cassette with pads which scrubs the tape head as the hubs of the cleaner cassette turn. It is normal for the cartridge to eject while cleaning. Insert the cassette at least 3 times to insure thorough cleaning. A scrubbing action cleaning cassette is available through your dealer.

You may also choose a non-scrubbing action wet-type cleaner which uses a cassette with a fabric felt to clean the tape head. This type of cleaning cassette will not eject. It may not clean as thorough as the scrubbing type cleaner.

Cassettes are subject to wear and the sound quality may degrade over time. Always make sure that the cassette tape is in good condition before you have your tape player serviced.

## Fixed Mast Antenna

The fixed mast antenna can withstand most car washes without being damaged. If the mast should ever become slightly bent, you can straighten it out by hand. If the mast is badly bent, as it might be by vandals, you should replace it.

Check every once in a while to be sure the mast is still tightened to the fender.

## Power Antenna Mast Care

Your power antenna will look its best and work well if it's cleaned from time to time.

**To Clean the Antenna Mast:**

1. Turn on the ignition and radio to raise the antenna to full mast extension.
2. Dampen a clean cloth with mineral spirits or equivalent solvent.
3. Wipe cloth over the mast sections, removing any dirt.
4. Wipe dry with clean cloth before retracting.
5. Make the antenna go up and down by turning the radio or ignition on and off.
6. Then repeat if necessary.

**NOTICE:**

**Don't lubricate the power antenna. Lubrication could damage it.**

**NOTICE:**

**Before entering an automatic car wash, turn off your radio to make the power antenna go down. This will prevent the mast from possibly getting damaged. If the antenna does not go down when you turn the radio off, it may be damaged or need to be cleaned. In either case, lower the antenna by hand by carefully pressing the antenna down.**

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## NOTES

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## NOTES

# Section 4 Your Driving and the Road

Here you'll find information about driving on different kinds of roads and in varying weather conditions. We've also included many other useful tips on driving.

## Defensive Driving

The best advice anyone can give about driving is: Drive defensively.

Please start with a very important safety device in your Buick: Buckle up. (See "Safety Belts" in the Index.)

Defensive driving really means "be ready for anything." On city streets, rural roads, or freeways, it means "always expect the unexpected."

Assume that pedestrians or other drivers are going to be careless and make mistakes. Anticipate what they might do. Be ready for their mistakes.

Rear-end collisions are about the most preventable of accidents. Yet they are common. Allow enough following distance. It's the best defensive driving maneuver, in both city and rural driving. You never know when the vehicle in front of you is going to brake or turn suddenly.

# Drunken Driving

Death and injury associated with drinking and driving is a national tragedy. It's the number one contributor to the highway death toll, claiming thousands of victims every year.

Alcohol affects four things that anyone needs to drive a vehicle:

- Judgment
- Muscular Coordination
- Vision
- Attentiveness

Police records show that almost half of all motor vehicle-related deaths involve alcohol. In most cases, these deaths are the result of someone who was drinking and driving. In recent years, some 18,000 annual motor vehicle-related deaths have been associated with the use of alcohol, with more than 300,000 people injured.

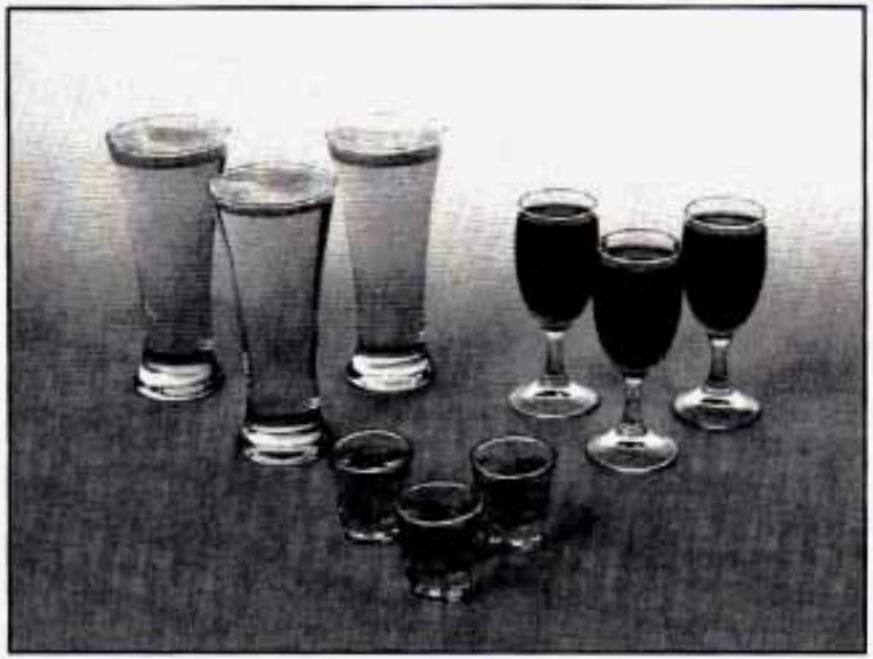
Many adults -- by some estimates, nearly half the adult population -- choose never to drink alcohol, so they never drive after drinking. For persons under 21, it's against the law in every U.S. state to drink alcohol. There are good medical, psychological and developmental reasons for these laws.

The obvious way to solve this highway safety problem is for people never to drink alcohol and then drive. But what if people do? How much is "too much" if the driver plans to drive? It's a lot less than many might think. Although it depends on each person and situation, here is some general information on the problem.

The Blood Alcohol Concentration (BAC) of someone who is drinking depends upon four things:

- How much alcohol consumed
- The drinker's body weight
- The amount of food that is consumed before and during drinking
- The length of time it has taken the drinker to consume the alcohol

According to the American Medical Association, a 180-pound (82 kg) person who drinks three 12-ounce (355 ml) bottles of beer in an hour will end up with a BAC of about 0.06 percent. The person would reach the same BAC by drinking three 4-ounce (120 ml) glasses of wine or three mixed drinks if each had 1-1/2 ounces (45 ml) of a liquor like whiskey, gin or vodka.



It's the amount of alcohol that counts. For example, if the same person drank three double martinis (3 ounces or 90 ml of liquor each) within an hour, the person's BAC would be close to 0.12 percent. A person who consumes food just before or during drinking will have a somewhat lower BAC level.

There is a gender difference, too. Women generally have a lower relative percentage of body water than men. Since alcohol is carried in body water, this means that a woman generally will reach a higher BAC level than a man of her same body weight when each has the same number of drinks.

The law in many U.S. states sets the legal limit at a BAC of 0.10 percent. In a growing number of U.S. states, and throughout Canada, the limit is 0.08 percent. In some other countries it's even lower. The BAC limit for all commercial drivers in the U.S. is 0.04 percent.

The BAC will be over 0.10 percent after three to six drinks (in one hour). Of course, as we've seen, it depends on how much alcohol is in the drinks, and how quickly the person drinks them.

But the ability to drive is affected well below a BAC of 0.10 percent. Research shows that the driving skills of many people are impaired at a BAC approaching 0.05 percent, and that the effects are worse at night. All drivers are impaired at BAC levels above 0.05 percent. Statistics show that the chance of being in a collision increases sharply for drivers who have a BAC of 0.05 percent or above. A driver with a BAC level of 0.06 percent has doubled his or her chance of having a collision. At a BAC level of 0.10 percent, the chance of this driver having a collision is twelve times greater; at a level of 0.15 percent, the chance is twenty-five times greater!

The body takes about an hour to rid itself of the alcohol in one drink. No amount of coffee or number of cold showers will speed that up. "I'll be careful" isn't the right answer. What if there's an emergency, a need to take sudden action, as when a child darts into the street? A person with even a moderate BAC might not be able to react quickly enough to avoid the collision.

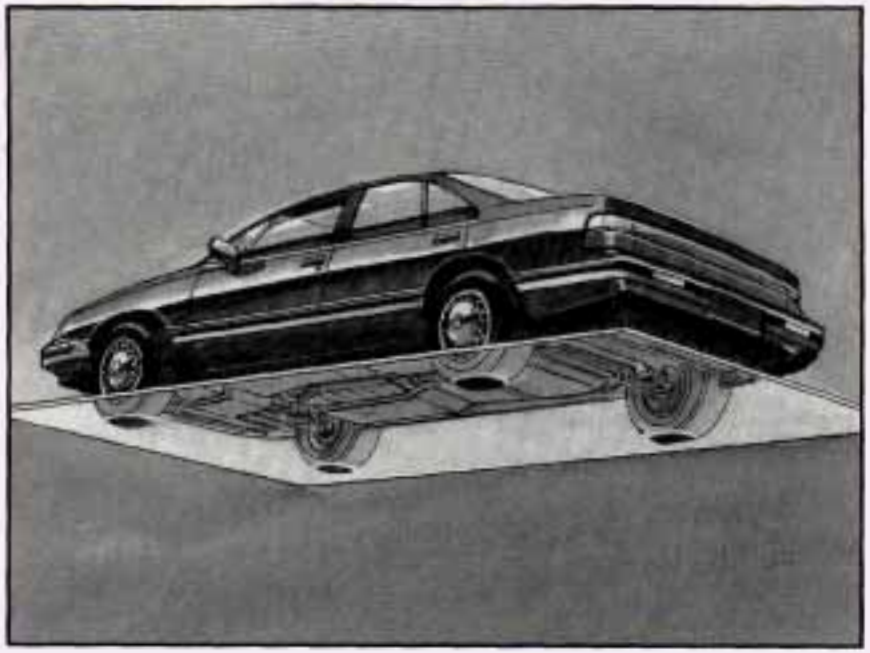
There's something else about drinking and driving that many people don't know. Medical research shows that alcohol in a person's system can make crash injuries worse, especially injuries to the brain, spinal cord or heart. This means that when anyone who has been drinking -- driver or passenger -- is in a crash, that person's chance of being killed or permanently disabled is higher than if the person had not been drinking.

**⚠ CAUTION:**

**Drinking and then driving is very dangerous. Your reflexes, perceptions, attentiveness and judgment can be affected by even a small amount of alcohol. You can have a serious -- or even fatal -- collision if you drive after drinking. Please don't drink and drive or ride with a driver who has been drinking. Ride home in a cab; or if you're with a group, designate a driver who will not drink.**

## Control of a Vehicle

You have three systems that make your vehicle go where you want it to go. They are the brakes, the steering and the accelerator. All three systems have to do their work at the places where the tires meet the road.



Sometimes, as when you're driving on snow or ice, it's easy to ask more of those control systems than the tires and road can provide. That means you can lose control of your vehicle.

## Braking

Braking action involves *perception time* and *reaction time.*

First, you have to decide to push on the brake pedal. That's *perception time.* Then you have to bring up your foot and do it. That's *reaction time.*

Average *reaction time* is about 3/4 of a second. But that's only an average. It might be less with one driver and as long as two or three seconds or more with another. Age, physical condition, alertness, coordination, and eyesight all play a part. So do alcohol, drugs and frustration. But even in 3/4 of a second, a vehicle moving at 60 mph (100 km/h) travels 66 feet (20 m). That could be a lot of distance in an emergency, so keeping enough space between your vehicle and others is important.

And, of course, actual stopping distances vary greatly with the surface of the road (whether it's pavement or gravel); the condition of the road (wet, dry, icy); tire tread; and the condition of your brakes.

Avoid needless heavy braking. Some people drive in spurts -- heavy acceleration followed by heavy braking -- rather than keeping pace with traffic. This is a mistake. Your brakes may not have time to cool between hard stops. Your brakes will wear out much faster if you

do a lot of heavy braking. If you keep pace with the traffic and allow realistic following distances, you will eliminate a lot of unnecessary braking. That means better braking and longer brake life.

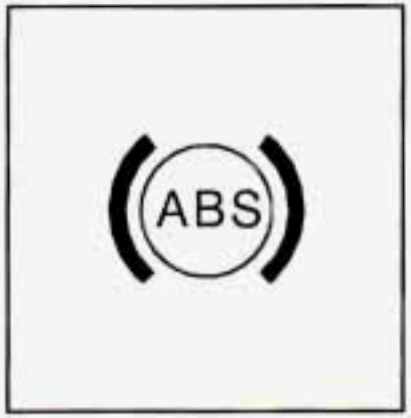
If your engine ever stops while you're driving, brake normally but don't pump your brakes. If you do, the pedal may get harder to push down. If your engine stops, you will still have some power brake assist. But you will use it when you brake. Once the power assist is used up, it may take longer to stop and the brake pedal will be harder to push.

## Anti-Lock Brakes (ABS)

Your Buick has an advanced electronic braking system that will help prevent a braking skid.

**Domestic**

**Canadian**




This light on the instrument panel will come on briefly when you start your vehicle.

When you start your vehicle, or when you begin to drive away, you may hear a momentary motor or clicking noise. And you may even notice that your brake pedal moves a little while this is going on. This is the ABS system testing itself. If there's a problem with the anti-lock brake system, the anti-lock brake system warning light will stay on or flash.

See "Anti-Lock Brake System Warning Light" in the Index.

Here's how anti-lock works. Let's say the road is wet. You're driving safely. Suddenly an animal jumps out in front of you.

You slam on the brakes. Here's what happens with ABS.

A computer senses that wheels are slowing down. If one of the wheels is about to stop rolling, the computer will separately work the brakes at each front wheel and at the rear wheels.

The anti-lock system can change the brake pressure faster than any driver could. The computer is programmed to make the most of available tire and road conditions.

You can steer around the obstacle while braking hard.

As you brake, your computer keeps receiving updates on wheel speed and controls braking pressure accordingly.

Remember: Anti-lock doesn't change the time you need to get your foot up to the brake pedal. If you get too close to the vehicle in front of you, you won't have time to apply your brakes if that vehicle suddenly slows or stops. Always leave enough room up ahead to stop, even though you have anti-lock brakes.

### To Use Anti-Lock

Don't pump the brakes. Just hold the brake pedal down and let anti-lock work for you. You may feel the system working, or you may notice some noise, but this is normal. When your anti-lock system is adjusting brake pressure to help avoid a braking skid, the LOW TRACTION light will come on. See "Anti-Lock Brake System Active Light" in the Index.

## Braking in Emergencies

Use your anti-lock braking system when you need to. With anti-lock, you can steer and brake at the same time. In many emergencies, steering can help you more than even the very best braking.

# Steering

## Power Steering

If you lose power steering assist because the engine stops or the system is not functioning, you can steer but it will take much more effort.

## Steering Tips

### Driving on Curves

It's important to take curves at a reasonable speed.

A lot of the "driver lost control" accidents mentioned on the news happen on curves. Here's why:

Experienced driver or beginner, each of us is subject to the same laws of physics when driving on curves. The traction of the tires against the road surface makes it possible for the vehicle to change its path when you turn the front wheels. If there's no traction, inertia will keep the vehicle going in the same direction. If you've ever tried to steer a vehicle on wet ice, you'll understand this.

The traction you can get in a curve depends on the condition of your tires and the road surface, the angle at which the curve is banked, and your speed. While you're in a curve, speed is the one factor you can control.

Suppose you're steering through a sharp curve. Then you suddenly accelerate. Both control systems -- steering and acceleration -- have to do their work where the tires meet the road. Adding the sudden acceleration can demand too much of those places. You can lose control.

What should you do if this ever happens? Ease up on the accelerator pedal, steer the vehicle they way you want it to go, and slow down.

Speed limit signs near curves warn that you should adjust your speed. Of course, the posted speeds are based on good weather and road conditions. Under less favorable conditions you'll want to go slower.

If you need to reduce your speed as you approach a curve, do it before you enter the curve, while your front wheels are straight ahead.

Try to adjust your speed so you can "drive" through the curve. Maintain a reasonable, steady speed. Wait to accelerate until you are out of the curve, and then accelerate gently into the straightaway.

## Steering in Emergencies

There are times when steering can be more effective than braking. For example, you come over a hill and find a truck stopped in your lane, or a car suddenly pulls out from nowhere, or a child darts out from between parked cars and stops right in front of you. You can avoid these problems by braking -- if you can stop in time. But sometimes you can't; there isn't room. That's the time for evasive action -- steering around the problem.

Your Buick can perform very well in emergencies like these. First apply your brakes. (See "Braking in Emergencies" earlier in this section.) It is better to remove as much speed as you can from a possible collision. Then steer around the problem, to the left or right depending on the space available.

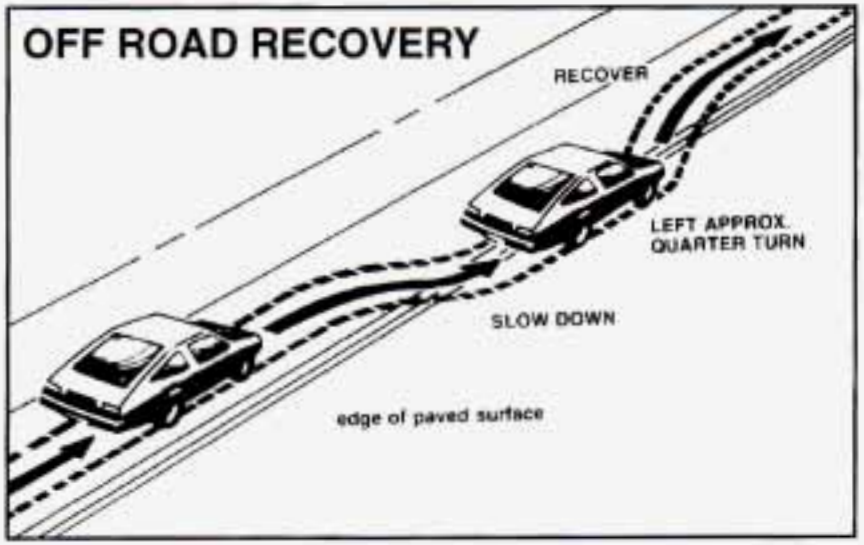
An emergency like this requires close attention and a quick decision. If you are holding the steering wheel at the recommended 9 and 3 o'clock positions, you can turn it a full 180 degrees very quickly without removing either hand. But you have to act fast, steer quickly, and just as quickly straighten the wheel once you have avoided the object.

The fact that such emergency situations are always possible is a good reason to practice defensive driving at all times and wear safety belts properly.

## Off-Road Recovery

You may find sometime that your right wheels have dropped off the edge of a road onto the shoulder while you're driving.

If the level of the shoulder is only slightly below the pavement, recovery should be fairly easy. Ease off the accelerator and then, if there is nothing in the way, steer so that your vehicle straddles the edge of the pavement. You can turn the steering wheel up to 1/4 turn until the right front tire contacts the pavement edge. Then turn your steering wheel to go straight down the roadway.



## Passing

The driver of a vehicle about to pass another on a two-lane highway waits for just the right moment, accelerates, moves around the vehicle ahead, then goes back into the right lane again. A simple maneuver?

Not necessarily! Passing another vehicle on a two-lane highway is a potentially dangerous move, since the passing vehicle occupies the same lane as oncoming traffic for several seconds. A miscalculation, an error in judgment, or a brief surrender to frustration or anger can suddenly put the passing driver face to face with the worst of all traffic accidents -- the head-on collision.

So here are some tips for passing:

- "Drive ahead." Look down the road, to the sides, and to crossroads for situations that might affect your passing patterns. If you have any doubt whatsoever about making a successful pass, wait for a better time.
- Watch for traffic signs, pavement markings, and lines. If you can see a sign up ahead that might indicate a turn or an intersection, delay your pass. A broken center line usually indicates it's all right to pass (providing the road ahead is clear). Never cross a solid line on your side of the lane or a double solid line, even if the road seems empty of approaching traffic.
- Do not get too close to the vehicle you want to pass while you're awaiting an opportunity. For one thing, following too closely reduces your area of vision, especially if you're following a larger vehicle. Also, you won't have adequate space if the vehicle ahead suddenly slows or stops. Keep back a reasonable distance.
- When it looks like a chance to pass is coming up, start to accelerate but stay in the right lane and don't get too close. Time your move so you will be increasing speed as the time comes to move into the other lane. If the way is clear to pass, you will have a "running start" that more than makes up for the distance you would lose by dropping back. And if something happens to cause you to cancel your pass, you need only slow down and drop back again and wait for another opportunity.
- If other cars are lined up to pass a slow vehicle, wait your turn. But take care that someone isn't trying to pass you as you pull out to pass the slow vehicle. Remember to glance over your shoulder and check the blind spot.

- Check your mirrors, glance over your shoulder, and start your left lane change signal before moving out of the right lane to pass. When you are far enough ahead of the passed vehicle to see its front in your inside mirror, activate your right lane change signal and move back into the right lane. (Remember that your right outside mirror is convex. The vehicle you just passed may seem to be farther away from you than it really is.)
- Try not to pass more than one vehicle at a time on two-lane roads. Reconsider before passing the next vehicle.
- Don't overtake a slowly moving vehicle too rapidly. Even though the brake lamps are not flashing, it may be slowing down or starting to turn.
- If you're being passed, make it easy for the following driver to get ahead of you. Perhaps you can ease a little to the right.

# Loss of Control

Let's review what driving experts say about what happens when the three control systems (brakes, steering and acceleration) don't have enough friction where the tires meet the road to do what the driver has asked.

In any emergency, don't give up. Keep trying to steer and constantly seek an escape route or area of less danger.

## Skidding

In a skid, a driver can lose control of the vehicle. Defensive drivers avoid most skids by taking reasonable care suited to existing conditions, and by not "overdriving" those conditions. But skids are always possible.

The three types of skids correspond to your Buick's three control systems. In the braking skid your wheels aren't rolling. In the steering or cornering skid, too much speed or steering in a curve causes tires to slip and lose cornering force. And in the acceleration skid too much throttle causes the driving wheels to spin.

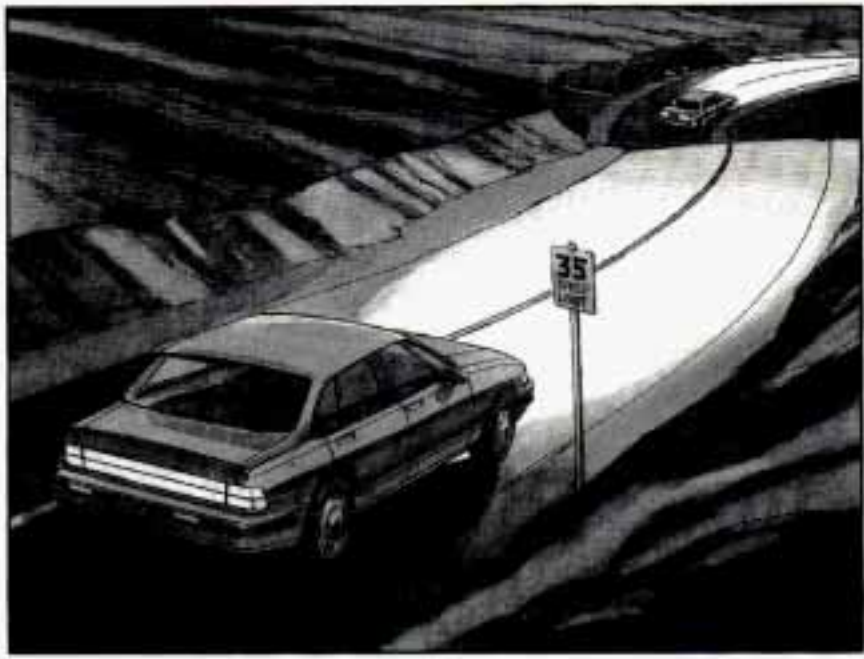
If your vehicle starts to slide, ease your foot off the accelerator pedal and quickly steer the way you want the vehicle to go. If you start steering quickly enough, your vehicle may straighten out. Always be ready for a second skid if it occurs.

Of course, traction is reduced when water, snow, ice, gravel, or other material is on the road. For safety, you'll want to slow down and adjust your driving to these conditions. It is important to slow down on slippery surfaces because stopping distance will be longer and vehicle control more limited.

While driving on a surface with reduced traction, try your best to avoid sudden steering, acceleration, or braking (including engine braking by shifting to a lower gear). Any sudden changes could cause the tires to slide. You may not realize the surface is slippery until your vehicle is skidding. Learn to recognize warning clues -- such as enough water, ice or packed snow on the road to make a "mirrored surface" -- and slow down when you have any doubt.

Remember: Any anti-lock brake system (ABS) helps avoid only the braking skid.

## Driving at Night




Night driving is more dangerous than day driving. One reason is that some drivers are likely to be impaired -- by alcohol or drugs, with night vision problems, or by fatigue.

Here are some tips on night driving.

- Drive defensively.
- Don't drink and drive.

- Adjust your inside rearview mirror to reduce the glare from headlamps behind you.
- Since you can't see as well, you may need to slow down and keep more space between you and other vehicles.
- Slow down, especially on higher speed roads. Your headlamps can light up only so much road ahead.
- In remote areas, watch for animals.
- If you're tired, pull off the road in a safe place and rest.

## Night Vision

No one can see as well at night as in the daytime. But as we get older these differences increase. A 50-year-old driver may require at least twice as much light to see the same thing at night as a 20-year-old.

What you do in the daytime can also affect your night vision. For example, if you spend the day in bright sunshine you are wise to wear sunglasses. Your eyes will have less trouble adjusting to night. But if you're driving, don't wear sunglasses at night. They may cut down on glare from headlamps, but they also make a lot of things invisible.

You can be temporarily blinded by approaching lights. It can take a second or two, or even several seconds, for your eyes to readjust to the dark. When you are faced with severe glare (as from a driver who doesn't lower the high beams, or a vehicle with misaimed headlamps), slow down a little. Avoid staring directly into the approaching lights.

Keep your windshield and all the glass on your vehicle clean -- inside and out. Glare at night is made much worse by dirt on the glass. Even the inside of the glass can build up a film caused by dust. Dirty glass makes lights dazzle and flash more than clean glass would, making the pupils of your eyes contract repeatedly.

Remember that your headlamps light up far less of a roadway when you are in a turn or curve. Keep your eyes moving; that way, it's easier to pick out dimly lighted objects. Just as your headlamps should be checked regularly for proper aim, so should your eyes be examined regularly. Some drivers suffer from night blindness -- the inability to see in dim light -- and aren't even aware of it.

## Driving in the Rain

Rain and wet roads can mean driving trouble. On a wet road you can't stop, accelerate or turn as well because your tire-to-road traction isn't as good as on dry roads.

And, if your tires don't have much tread left, you'll get even less traction. It's always wise to go slower and be cautious if rain starts to fall while you are driving. The surface may get wet suddenly when your reflexes are tuned for driving on dry pavement.

The heavier the rain, the harder it is to see. Even if your windshield wiper blades are in good shape, a heavy rain can make it harder to see road signs and traffic signals, pavement markings, the edge of the road, and even people walking.

It's wise to keep your wiping equipment in good shape and keep your windshield washer tank filled. Replace your windshield wiper inserts when they show signs of streaking or missing areas on the windshield, or when strips of rubber start to separate from the inserts.

Driving too fast through large water puddles or even going through some car washes can cause problems, too. The water may affect your brakes. Try to avoid puddles. But if you can't, try to slow down before you hit them.

**⚠ CAUTION:**

**Wet brakes can cause accidents. They won't work well in a quick stop and may cause pulling to one side. You could lose control of the vehicle.**

**After driving through a large puddle of water or a car wash, apply your brake pedal lightly until your brakes work normally.**

## Hydroplaning

Hydroplaning is dangerous. So much water can build up under your tires that they can actually ride on the water. This can happen if the road is wet enough and you're going fast enough. When your vehicle is hydroplaning, it has little or no contact with the road.

Hydroplaning doesn't happen often. But it can if your tires haven't much tread or if the pressure in one or more is low. It can happen if a lot of water is standing on the road. If you can see reflections from trees, telephone poles, or other vehicles, and raindrops "dimple" the water's surface, there could be hydroplaning.

Hydroplaning usually happens at higher speeds. There just isn't a hard and fast rule about hydroplaning. The best advice is to slow down when it is raining.

## Some Other Rainy Weather Tips

- Turn on your low-beam headlamps -- not just your parking lamps -- to help make you more visible to others.
- Besides slowing down, allow some extra following distance. And be especially careful when you pass another vehicle. Allow yourself more clear room ahead, and be prepared to have your view restricted by road spray.
- Have good tires with proper tread depth. (See "Tires" in the Index.)

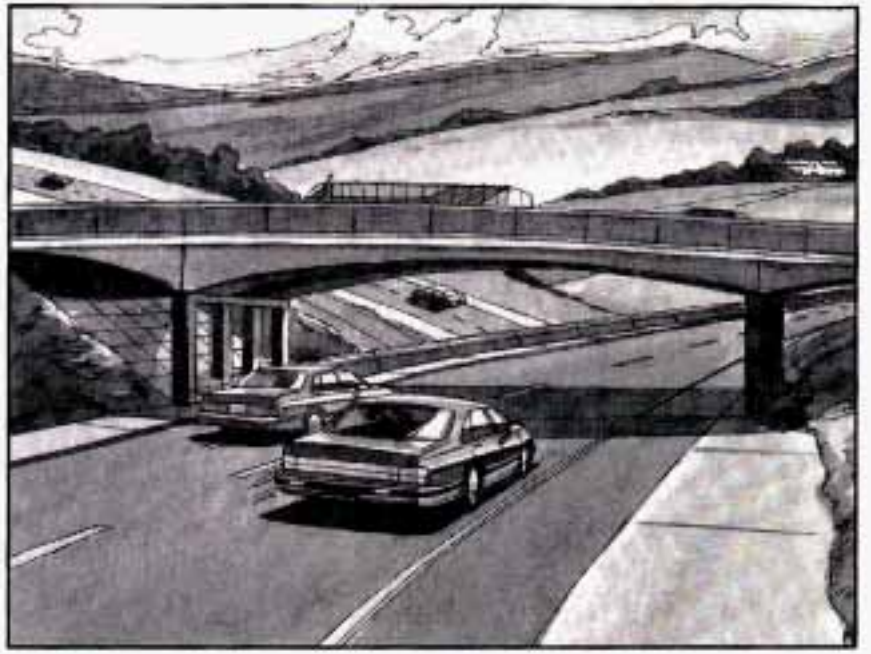
## City Driving

One of the biggest problems with city streets is the amount of traffic on them. You'll want to watch out for what the other drivers are doing and pay attention to traffic signals.

Here are ways to increase your safety in city driving:

- Know the best way to get to where you are going. Get a city map and plan your trip into an unknown part of the city just as you would for a cross-country trip.
- Try to use the freeways that rim and crisscross most large cities. You'll save time and energy. (See the next part, "Freeway Driving.")
- Treat a green light as a warning signal. A traffic light is there because the corner is busy enough to need it. When a light turns green, and just before you start to move, check both ways for vehicles that have not cleared the intersection or may be running the red light.

## Freeway Driving



Mile for mile, freeways (also called thruways, parkways, expressways, turnpikes, or superhighways) are the safest of all roads. But they have their own special rules.

The most important advice on freeway driving is: Keep up with traffic and keep to the right. Drive at the same speed most of the other drivers are driving. Too-fast or too-slow driving breaks a smooth traffic flow. Treat the left lane on a freeway as a passing lane.

At the entrance there is usually a ramp that leads to the freeway. If you have a clear view of the freeway as you drive along the entrance ramp, you should begin to check traffic. Try to determine where you expect to blend with the flow. Try to merge into the gap at close to the prevailing speed. Switch on your turn signal, check your mirrors and glance over your shoulder as often as necessary. Try to blend smoothly with the traffic flow.

Once you are on the freeway, adjust your speed to the posted limit or to the prevailing rate if it's slower. Stay in the right lane unless you want to pass.

Before changing lanes, check your mirrors. Then use your turn signal.

Just before you leave the lane, glance quickly over your shoulder to make sure there isn't another vehicle in your "blind" spot.

Once you are moving on the freeway, make certain you allow a reasonable following distance. Expect to move slightly slower at night.

When you want to leave the freeway, move to the proper lane well in advance. If you miss your exit do not, under any circumstances, stop and back up. Drive on to the next exit.

The exit ramp can be curved, sometimes quite sharply.

The exit speed is usually posted.

Reduce your speed according to your speedometer, not to your sense of motion. After driving for any distance at higher speeds, you may tend to think you are going slower than you actually are.

## Before Leaving on a Long Trip

Make sure you're ready. Try to be well rested. If you must start when you're not fresh -- such as after a day's work -- don't plan to make too many miles that first part of the journey. Wear comfortable clothing and shoes you can easily drive in.

Is your vehicle ready for a long trip? If you keep it serviced and maintained, it's ready to go. If it needs service, have it done before starting out. Of course, you'll find experienced and able service experts in Buick dealers all across North America. They'll be ready and willing to help if you need it.

Here are some things you can check before a trip:

- *Windshield Washer Fluid:* Is the reservoir full? Are all windows clean inside and outside?
- *Wiper Blades:* Are they in good shape?
- *Fuel, Engine Oil, Other Fluids:* Have you checked all levels?
- *Lamps:* Are they all working? Are the lenses clean?
- *Tires:* They are vitally important to a safe, trouble-free trip. Is the tread good enough for long-distance driving? Are the tires all inflated to the recommended pressure?
- *Weather Forecasts:* What's the weather outlook along your route? Should you delay your trip a short time to avoid a major storm system?
- *Maps:* Do you have up-to-date maps?

## Highway Hypnosis

Is there actually such a condition as "highway hypnosis"? Or is it just plain falling asleep at the wheel? Call it highway hypnosis, lack of awareness, or whatever.

There is something about an easy stretch of road with the same scenery, along with the hum of the tires on the road, the drone of the engine, and the rush of the wind against the vehicle that can make you sleepy. Don't let it happen to you! If it does, your vehicle can leave the road in *less than a second*, and you could crash and be injured.

What can you do about highway hypnosis? First, be aware that it can happen.

Then here are some tips:

- Make sure your vehicle is well ventilated, with a comfortably cool interior.
- Keep your eyes moving. Scan the road ahead and to the sides. Check your rearview mirrors and your instruments frequently.
- If you get sleepy, pull off the road into a rest, service, or parking area and take a nap, get some exercise, or both. For safety, treat drowsiness on the highway as an emergency.

# Hill and Mountain Roads

Driving on steep hills or mountains is different from driving in flat or rolling terrain.

If you drive regularly in steep country, or if you're planning to visit there, here are some tips that can make your trips safer and more enjoyable.

- Keep your vehicle in good shape. Check all fluid levels and also the brakes, tires, cooling system and transaxle. These parts can work hard on mountain roads.
- Know how to go down hills. The most important thing to know is this: let your engine do some of the slowing down. Shift to a lower gear when you go down a steep or long hill.

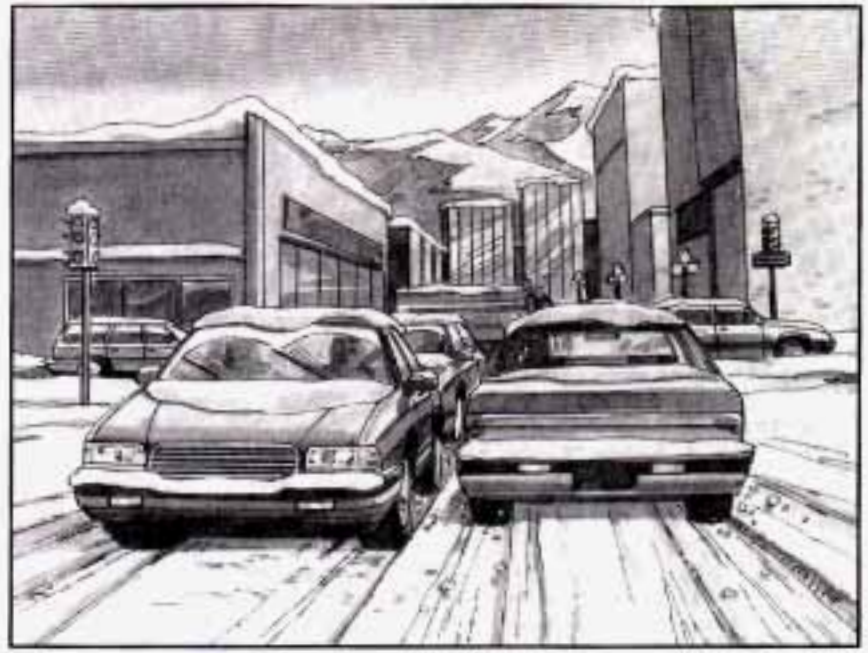
**⚠ CAUTION:**

**If you don't shift down, your brakes could get so hot that they wouldn't work well. You would then have poor braking or even none going down a hill. You could crash. Shift down to let your engine assist your brakes on a steep downhill slope.**

> **⚠ CAUTION:**
>
> **Coasting downhill in NEUTRAL (N) or with the ignition off is dangerous. Your brakes will have to do all the work of slowing down. They could get so hot that they wouldn't work well. You could crash. Always have your engine running and your vehicle in gear when you go downhill.**

- Know how to go uphill. You may want to shift down to a lower gear. The lower gears help cool your engine and transaxle, and you can climb the hill better.
- Stay in your own lane when driving on two-lane roads in hills or mountains. Don't swing wide or cut across the center of the road. Drive at speeds that let you stay in your own lane.
- As you go over the top of a hill, be alert. There could be something in your lane, like a stalled car or an accident.
- You may see highway signs on mountains that warn of special problems. Examples are long grades, passing or no-passing zones, a falling rocks area, or winding roads. Be alert to these and take appropriate action.

## Winter Driving



Here are some tips for winter driving:

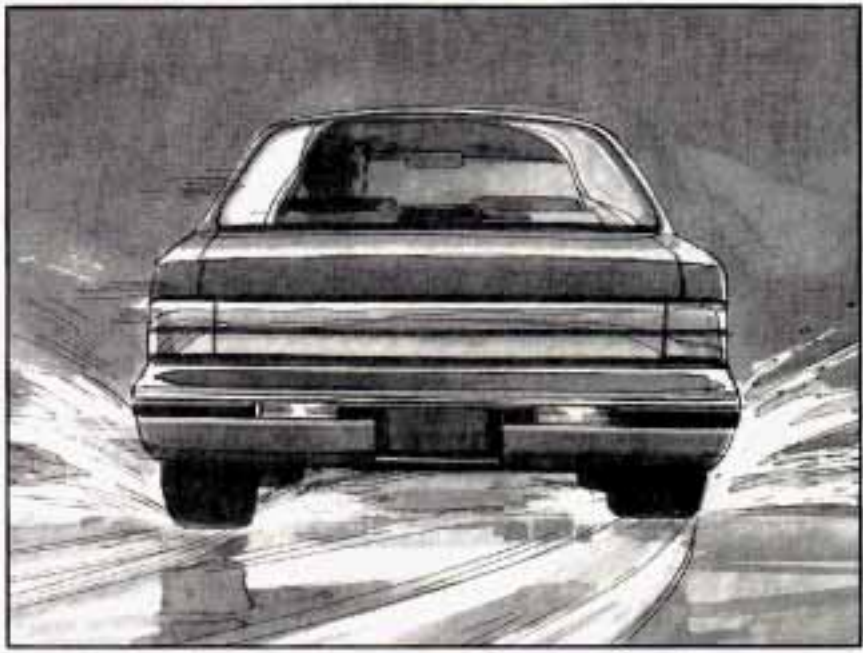
- Have your Buick in good shape for winter. Be sure your engine coolant mix is correct.
- You may want to put winter emergency supplies in your vehicle.

Include an ice scraper, a small brush or broom, a supply of windshield washer fluid, a rag, some winter outer clothing, a small shovel, a flashlight, a red cloth, and a couple of reflective warning triangles. And, if you will be driving under severe conditions, include a small bag of sand, a piece of old carpet or a couple of burlap bags to help provide traction. Be sure you properly secure these items in your vehicle.

## Driving on Snow or Ice

Most of the time, those places where your tires meet the road probably have good traction.

However, if there is snow or ice between your tires and the road, you can have a very slippery situation. You'll have a lot less traction or "grip" and will need to be very careful.



What's the worst time for this? "Wet ice." Very cold snow or ice can be slick and hard to drive on. But wet

ice can be even more trouble because it may offer the least traction of all. You can get "wet ice" when it's about freezing (32°F; 0°C) and freezing rain begins to fall. Try to avoid driving on wet ice until salt and sand crews can get there.

Whatever the condition -- smooth ice, packed, blowing or loose snow -- drive with caution. Accelerate gently. Try not to break the fragile traction. If you accelerate too fast, the drive wheels will spin and polish the surface under the tires even more.

Your anti-lock brakes improve your ability to make a hard stop on a slippery road. Even though you have the anti-lock braking system, you'll want to begin stopping sooner than you would on dry pavement. See "Anti-Lock" in the Index.

- Allow greater following distance on any slippery road.
- Watch for slippery spots. The road might be fine until you hit a spot that's covered with ice. On an otherwise clear road, ice patches may appear in shaded areas where the sun can't reach: around clumps of trees, behind buildings, or under bridges. Sometimes the surface of a curve or an overpass may remain icy when the surrounding roads are clear. If you see a patch of ice ahead of you, brake before you are on it. Try not to brake while you're actually on the ice, and avoid sudden steering maneuvers.

## If You're Caught in a Blizzard

If you are stopped by heavy snow, you could be in a serious situation. You should probably stay with your vehicle unless you know for sure that you are near help and you can hike through the snow. Here are some things to do to summon help and keep yourself and your passengers safe: Turn on your hazard flashers. Tie a red cloth to your vehicle to alert police that you've been stopped by the snow. Put on extra clothing or wrap a blanket around you. If you have no blankets or extra clothing, make body insulators from newspapers, burlap bags, rags, floor mats -- anything you can wrap around yourself or tuck under your clothing to keep warm.

You can run the engine to keep warm, but be careful.

**⚠ CAUTION:**

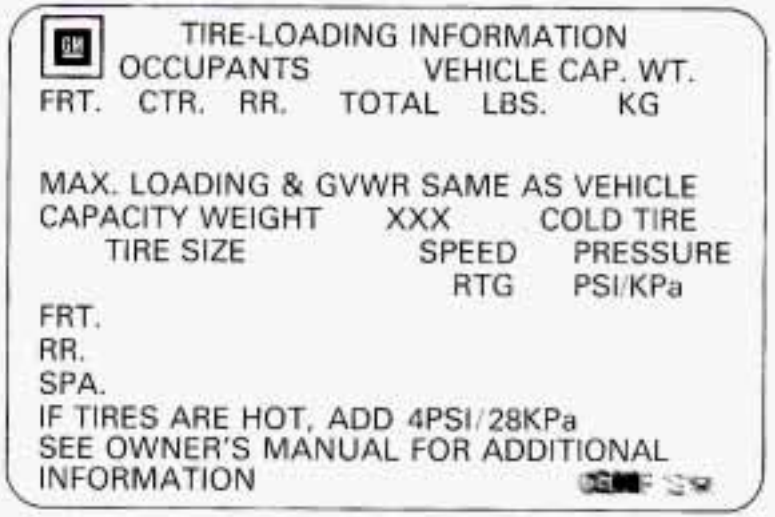
**Snow can trap exhaust gases under your vehicle. This can cause deadly CO (carbon monoxide) gas to get inside. CO could overcome you and kill you. You can't see it or smell it, so you might not know it is in your vehicle. Clear away snow from around the base of your vehicle, especially any that is blocking your exhaust pipe. And check around again from time to time to be sure snow doesn't collect there.**

**Open a window just a little on the side of the vehicle that's away from the wind. This will help keep CO out.**

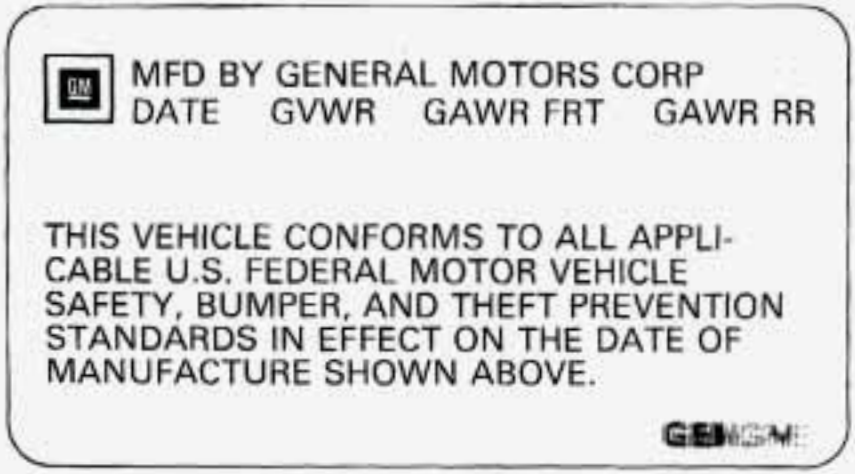
Run your engine only as long as you must. This saves fuel. When you run the engine, make it go a little faster than just idle. That is, push the accelerator slightly. This uses less fuel for the heat that you get and it keeps the battery charged. You will need a well-charged battery to restart the vehicle, and possibly for signaling later on with your headlamps. Let the heater run for awhile.

Then, shut the engine off and close the window almost all the way to preserve the heat. Start the engine again and repeat this only when you feel really uncomfortable from the cold. But do it as little as possible. Preserve the fuel as long as you can. To help keep warm, you can get out of the vehicle and do some fairly vigorous exercises every half hour or so until help comes.

# Loading Your Vehicle




Two labels on your vehicle show how much weight it may properly carry. The Tire-Loading Information label found on the rear edge of the driver's door tells you the proper size, speed rating and recommended inflation pressures for the tires on your vehicle. It also gives you important information about the number of people that can be in your vehicle and the total weight that you can carry. This weight is called the Vehicle Capacity Weight and includes the weight of all occupants, cargo, and all nonfactory-installed options.


MFD BY GENERAL MOTORS CORP
DATE GVWR GAWR FRT GAWR RR
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
GEM

The other label, is the Certification label, found on the rear edge of the driver's door. It tells you the gross weight capacity of your vehicle, called the GVWR (Gross Vehicle Weight Rating). The GVWR includes the weight of the vehicle, all occupants, fuel and cargo. Never exceed the GVWR for your vehicle, or the Gross Axle Weight Rating (GAWR) for either the front or rear axle.

And, if you do have a heavy load, you should spread it out. Don't carry more than 160 (72 kg) in the sedan trunk or 300 pounds (136 kg) in the six passenger-wagon rear area.

**⚠ CAUTION:**

**Do not load your vehicle any heavier than the GVWR, or either the maximum front or rear GAWR. If you do, parts on your vehicle can break, or it can change the way your vehicle handles. These could cause you to lose control. Also, overloading can shorten the life of your vehicle.**

If you put things inside your vehicle--like suitcases, tools, packages, or anything else--they will go as fast as the vehicle goes. If you have to stop or turn quickly, or if there is a crash, they'll keep going.

**⚠ CAUTION:**

**Things you put inside your vehicle can strike and injure people in a sudden stop or turn, or in a crash.**

- **Put things in the trunk or rear area of your vehicle. In a trunk, put them as far forward as you can. Try to spread the weight evenly.**
- **Never stack heavier things, like suitcases, inside the vehicle so that some of them are above the tops of the seats.**
- **Don't leave an unsecured child restraint in your vehicle.**
- **When you carry something inside the vehicle, secure it whenever you can.**
- **Don't leave a seat folded down unless you need to.**

## Towing a Trailer

**⚠ CAUTION:**

**If you don't use the correct equipment and drive properly, you can lose control when you pull a trailer. For example, if the trailer is too heavy, the brakes may not work well -- or even at all. You and your passengers could be seriously injured. Pull a trailer only if you have followed all the steps in this section. Ask your Buick dealer for advice and information about towing a trailer with your vehicle.**

**NOTICE:**

**Pulling a trailer improperly can damage your vehicle and result in costly repairs not covered by your warranty. To pull a trailer correctly, follow the advice in this part, and see your Buick dealer for important information about towing a trailer with your vehicle.**

Do not tow a trailer if your vehicle is equipped with a 2.2 L (VIN Code 4) engine.

Your car can tow a trailer if it is equipped with the 3100 V6 (VIN Code M) engine and proper trailer towing equipment. To identify what the vehicle trailering capacity is for your vehicle, you should read the information in "Weight of the Trailer" that appears later in this section. But trailering is different than just driving your vehicle by itself. Trailering means changes in handling, durability, and fuel economy. Successful, safe trailering takes correct equipment, and it has to be used properly.

That's the reason for this part. In it are many time-tested, important trailering tips and safety rules. Many of these are important for your safety and that of your passengers. So please read this section carefully before you pull a trailer.

Load-pulling components such as the engine, transaxle, wheel assemblies, and tires are forced to work harder against the drag of the added weight. The engine is required to operate at relatively higher speeds and under greater loads, generating extra heat. What's more, the trailer adds considerably to wind resistance, increasing the pulling requirements.

**If You Do Decide To Pull A Trailer**

If you do, here are some important points.

- There are many different laws, including speed limit restrictions, having to do with trailering. Make sure your rig will be legal, not only where you live but also where you'll be driving. A good source for this information can be state or provincial police.
- Consider using a sway control if your trailer will weigh 2,000 pounds (900 kg) or less. You should always use a sway control if your trailer will weigh more than 2,000 pounds (900 kg).
- Consider using a sway control.

You can ask a hitch dealer about sway controls.

- Don't tow a trailer at all during the first 1000 miles (1 600 km) your new vehicle is driven. Your engine, axle or other parts could be damaged.
- Then, during the first 500 miles (800 km) that you tow a trailer, don't drive over 50 mph (80 km/h) and don't make starts at full throttle. This helps your engine and other parts of your vehicle wear in at the heavier loads.
- Obey speed limit restrictions when towing a trailer. Don't drive faster than the maximum posted speed for trailers (or no more than 55 mph (90 km/h)) to save wear on your vehicle's parts.

Three important considerations have to do with weight:

## Weight of the Trailer

Your vehicle can tow normally up to 1,000 pounds (450kg). If your vehicle has a 3100 V6 engine with a four-speed automatic transaxle and is equipped with the optional heavy-duty engine cooling system, it can tow up to 2,000 pounds (900 kg).

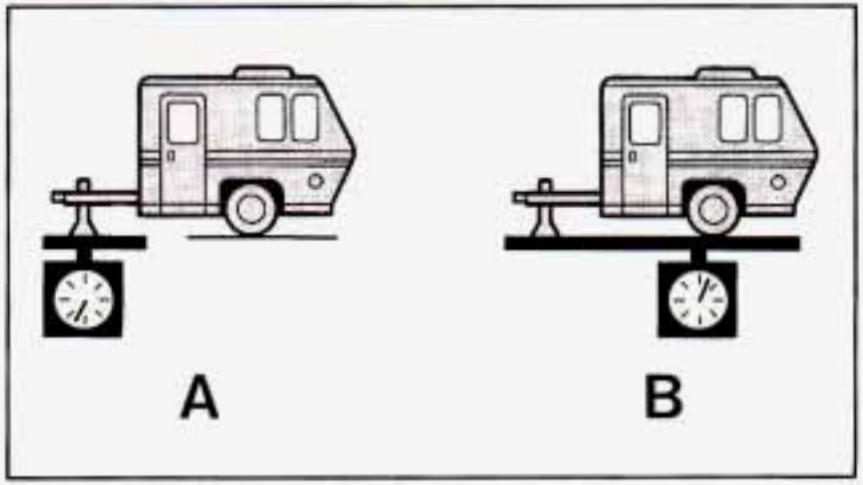
It depends on how you plan to use your rig. For example, speed, altitude, road grades, outside temperature and how much your vehicle is used to pull a trailer are all important. And, it can also depend on any special equipment that you have on your vehicle.

You can ask your dealer for our trailering information or advice, or you can write us at Buick Motor Division, Customer Assistance Center, 902 E. Hamilton Ave., Flint, MI 48550.

In Canada, write to General Motors of Canada Limited, Customer Assistance Center, 1908 Colonel Sam Drive, Oshawa, Ontario L1H 8P7.

## Weight of the Trailer Tongue

The tongue load (A) of any trailer is an important weight to measure because it affects the total capacity weight of your vehicle. The capacity weight includes the curb weight of the vehicle, any cargo you may carry in it, and the people who will be riding in the vehicle. And if you will tow a trailer, you must subtract the tongue load from your vehicle's capacity weight because your vehicle will be carrying that weight, too. See "Loading Your Vehicle" in the Index for more information about your vehicle's maximum load capacity.




If you're using a "dead-weight" hitch, the trailer tongue (A) should weigh 10% of the total loaded trailer weight (B). If you have a "weight-distributing" hitch, the trailer tongue (A) should weigh 12% of the total loaded trailer weight (B).

After you've loaded your trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If they aren't, you may be able to get them right simply by moving some items around in the trailer.

## Total Weight on Your Vehicle's Tires

Be sure your vehicle's tires are inflated to the recommended pressure for cold tires. You'll find these numbers on the Certification label at the rear edge of the driver's door or see "Loading Your Vehicle" in the Index. Then be sure you don't go over the GVW limit for your vehicle, including the weight of the trailer tongue.

## Hitches

It's important to have the correct hitch equipment. Crosswinds, large trucks going by, and rough roads are a few reasons why you'll need the right hitch. Here are some rules to follow:

- Will you have to make any holes in the body of your vehicle when you install a trailer hitch? If you do, then be sure to seal the holes later when you remove the hitch. If you don't seal them, deadly carbon monoxide (CO) from your exhaust can get into your vehicle (see "Carbon Monoxide" in the Index). Dirt and water can, too.
- The bumpers on your vehicle are not intended for hitches. Do not attach rental hitches or other bumper-type hitches to them. Use only a frame-mounted hitch that does not attach to the bumper.

## Safety Chains

You should always attach chains between your vehicle and your trailer. Cross the safety chains under the tongue of the trailer so that the tongue will not drop to the road if it becomes separated from the hitch. Instructions about safety chains may be provided by the hitch manufacturer or by the trailer manufacturer. Follow the manufacturer's recommendation for attaching safety chains and do not attach them to the bumper. Always leave just enough slack so you can turn with your rig. And, never allow safety chains to drag on the ground.

## Trailer Brakes

Does your trailer have its own brakes? Be sure to read and follow the instructions for the trailer brakes so you'll be able to install, adjust and maintain them properly. Because you have anti-lock brakes, do not try to tap into your vehicle's brake system. If you do, both brake systems won't work well, or at all.

## Driving with a Trailer

Towing a trailer requires a certain amount of experience. Before setting out for the open road, you'll want to get to know your rig. Acquaint yourself with the feel of handling and braking with the added weight of the trailer. And always keep in mind that the vehicle you are driving is now a good deal longer and not nearly as responsive as your vehicle is by itself.

Before you start, check the trailer hitch and platform (and attachments), safety chains, electrical connector, lamps, tires and mirror adjustment. If the trailer has electric brakes, start your vehicle and trailer moving and then apply the trailer brake controller by hand to be sure the brakes are working. This lets you check your electrical connection at the same time.

During your trip, check occasionally to be sure that the load is secure, and that the lamps and any trailer brakes are still working.

### Following Distance

Stay at least twice as far behind the vehicle ahead as you would when driving your vehicle without a trailer. This can help you avoid situations that require heavy braking and sudden turns.

### Passing

You'll need more passing distance up ahead when you're towing a trailer. And, because you're a good deal longer, you'll need to go much farther beyond the passed vehicle before you can return to your lane.

### Backing Up

Hold the bottom of the steering wheel with one hand. Then, to move the trailer to the left, just move that hand to the left. To move the trailer to the right, move your hand to the right. Always back up slowly and, if possible, have someone guide you.

## Making Turns

**NOTICE:**

**Making very sharp turns while trailering could cause the trailer to come in contact with the vehicle. Your vehicle could be damaged. Avoid making very sharp turns while trailering.**

When you're turning with a trailer, make wider turns than normal. Do this so your trailer won't strike soft shoulders, curbs, road signs, trees, or other objects. Avoid jerky or sudden maneuvers. Signal well in advance.

## Turn Signals When Towing a Trailer

When you tow a trailer, your vehicle has to have a different turn signal flasher and extra wiring. The green arrows on your instrument panel will flash whenever you signal a turn or lane change. Properly hooked up, the trailer lamps will also flash, telling other drivers you're about to turn, change lanes or stop.

When towing a trailer, the green arrows on your instrument panel will flash for turns even if the bulbs on the trailer are burned out. Thus, you may think drivers behind you are seeing your signal when they are not. It's important to check occasionally to be sure the trailer bulbs are still working.

## Driving On Grades

Reduce speed and shift to a lower gear *before* you start down a long or steep downgrade. If you don't shift down, you might have to use your brakes so much that they would get hot and no longer work well.

On a long uphill grade, shift down and reduce your speed to around 45 mph (70 km/h) to reduce the possibility of engine and transaxle overheating.

If you are towing a trailer that weighs more than 1,000 pounds (450 kg) and you have an automatic transaxle with Overdrive, you may prefer to drive in "D" instead of Overdrive. An overdrive transmission is required if towing a trailer more than 1,000 pounds (450 kg).

## Parking on Hills

You really should not park your vehicle, with a trailer attached, on a hill. If something goes wrong, your rig could start to move. People can be injured, and both your vehicle and the trailer can be damaged.

But if you ever have to park your rig on a hill, here's how to do it:

1. Apply your regular brakes, but don't shift into PARK (P) yet.
2. Have someone place chocks under the trailer wheels.
3. When the wheel chocks are in place, release the regular brakes until the chocks absorb the load.
4. Reapply the regular brakes. Then, apply your parking brake, and then shift to PARK (P).
5. Release the regular brakes.

## When You Are Ready to Leave After Parking on a Hill

1. Apply your regular brakes and hold the pedal down while you:
   - Start your engine;
   - Shift into a gear; and
   - Release the parking brake.
2. Let up on the brake pedal.
3. Drive slowly until the trailer is clear of the chocks.
4. Stop and have someone pick up and store the chocks.

## Maintenance When Trailer Towing

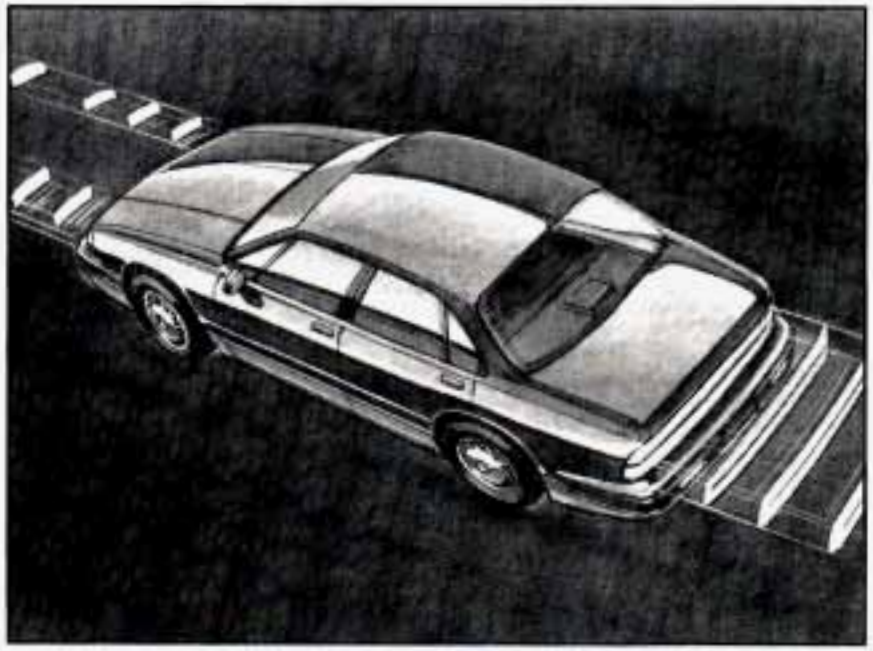
Your vehicle will need service more often when you're pulling a trailer. See the Maintenance Schedule for more on this. Things that are especially important in trailer operation are automatic transaxle fluid (don't overfill), engine oil, belt, cooling system, and brake adjustment. Each of these is covered in this manual, and the Index will help you find them quickly. If you're trailering, it's a good idea to review these sections before you start your trip.

Check periodically to see that all hitch nuts and bolts are tight.

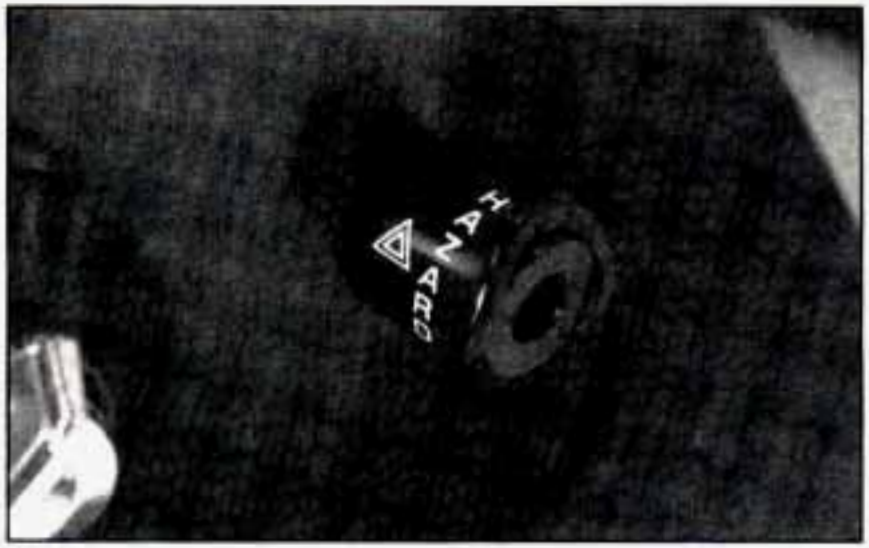
# Section 5 Problems on the Road

Here you'll find what to do about some problems that can occur on the road.

## Hazard Warning Flashers



Your hazard warning flashers let you warn others. They also let police know you have a problem. Your front and rear turn signal lamps will flash on and off.



Press the button in to make your front and rear turn signal lamps flash on and off.

Your hazard warning flashers work no matter what position your key is in and even if the key isn't in.

To turn off the flashers, pull out on the collar. When the hazard warning flashers are on, your turn signals won't work.

## Other Warning Devices

If you carry reflective triangles, you can set one up at the side of the road about 300 feet (100 m) behind your vehicle.

## Jump Starting

If your battery has run down, you may want to use another vehicle and some jumper cables to start your Buick. But please follow the steps to do it safely.

**⚠ CAUTION:**

**Batteries can hurt you. They can be dangerous because:**

- **They contain acid that can burn you.**
- **They contain gas that can explode or ignite.**
- **They contain enough electricity to burn you.**

**If you don't follow these steps exactly, some or all of these things can hurt you.**

**NOTICE:**

**Ignoring these steps could result in costly damage to your vehicle that wouldn't be covered by your warranty.**

**Trying to start your Buick by pushing or pulling it won't work, and it could damage your vehicle.**

## To Jump Start Your Buick:

1. Check the other vehicle. It must have a 12-volt battery with a negative ground system.

**NOTICE:**

**If the other system isn't a 12-volt system with a negative ground, both vehicles can be damaged.**

2. Get the vehicles close enough so the jumper cables can reach, but be sure the vehicles aren't touching each other. If they are, it could cause a ground connection you don't want. You wouldn't be able to start your Buick, and the bad grounding could damage the electrical systems.
3. Turn off the ignition on both vehicles. Turn off all lights that aren't needed, and radios. This will avoid sparks and help save both batteries. And it could save your radio!

**NOTICE:**

**If you leave your radio on, it could be badly damaged. The repairs wouldn't be covered by your warranty.**

4. Open the hoods and locate the batteries.

**⚠ CAUTION:**

**An electric fan can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.**

Find the positive (+) and negative (-) terminals on each battery.

**⚠ CAUTION:**

**Using a match near a battery can cause battery gas to explode. People have been hurt doing this, and some have been blinded. Use a flashlight if you need more light.**

**Be sure the battery has enough water. You don't need to add water to the Delco Freedom® battery installed in every new GM vehicle. But if a battery has filler caps, be sure the right amount of fluid is there. If it is low, add water to take care of that first. If you don't, explosive gas could be present.**

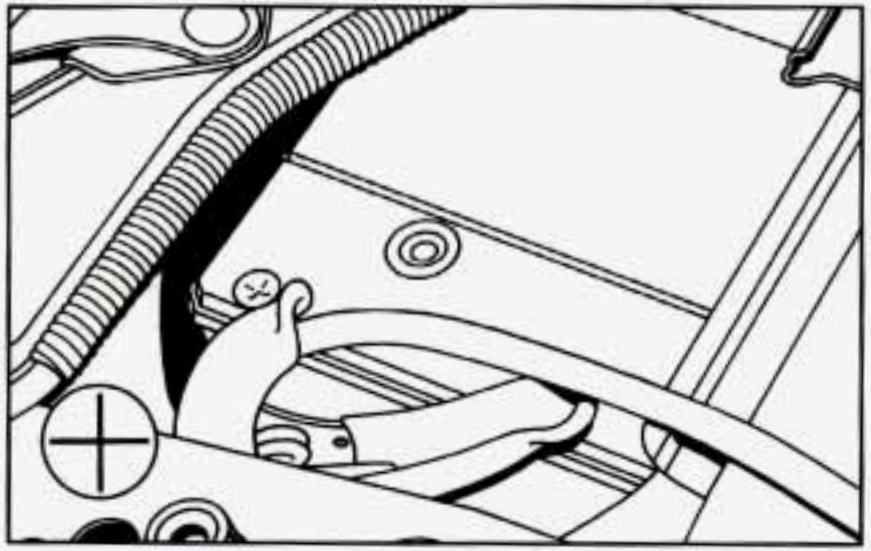
**Battery fluid contains acid that can burn you. Don't get it on you. If you accidentally get it in your eyes or on your skin, flush the place with water and get medical help immediately.**

5. Check that the jumper cables don't have loose or missing insulation. If they do, you could get a shock. The vehicles could be damaged, too.

   Before you connect the cables, here are some basic things you should know. Positive (+) will go to positive (+) and negative (-) will go to negative (-) or a metal engine part. Don't connect (+) to (-) or you'll get a short that would damage the battery and maybe other parts, too.

**⚠ CAUTION:**

**Fans or other moving engine parts can injure you badly. Keep your hands away from moving parts once the engines are running.**



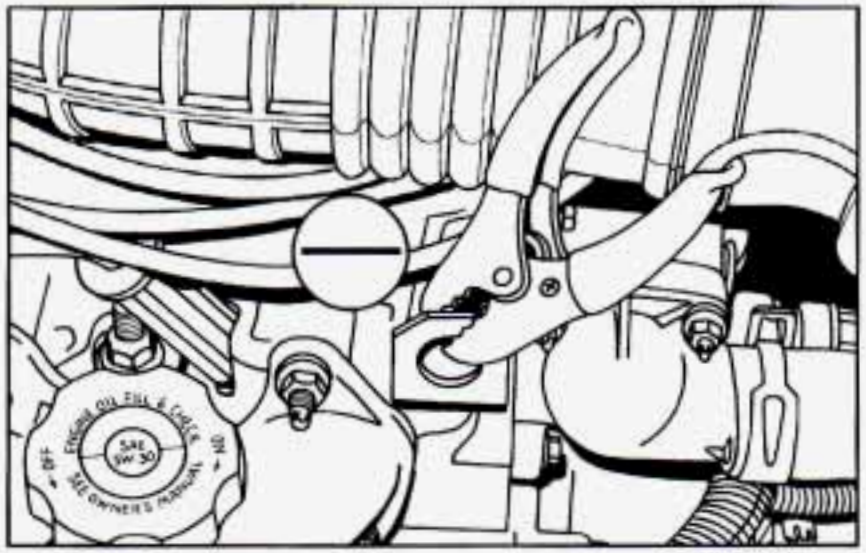
6. Connect the red positive (+) cable to the positive (+) terminal of the vehicle with the dead battery.

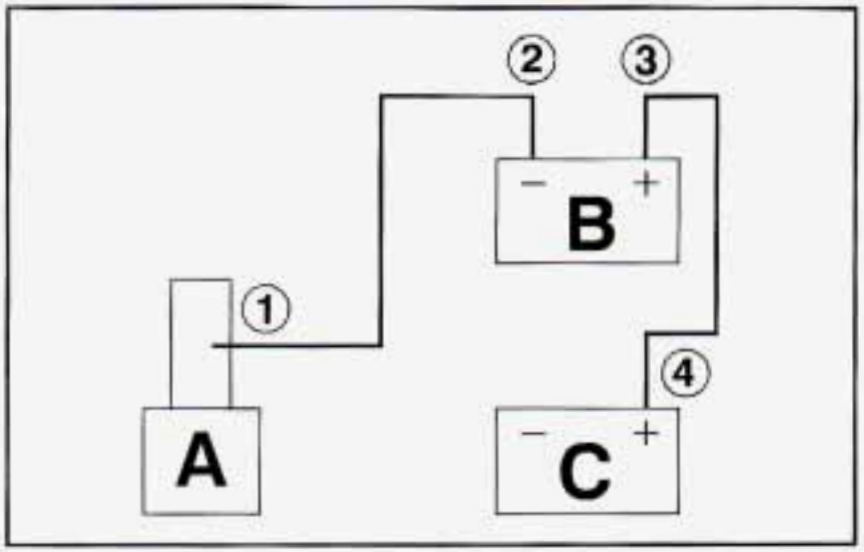
7. Don't let the other end touch metal. Connect it to the positive (+) terminal of the good battery.

8. Now connect the black negative (-) cable to the good battery's negative (-) terminal.

   Don't let the other end touch anything until the next step. The other end of the negative cable *doesn't* go to the dead battery. It goes to a heavy unpainted metal part on the engine of the vehicle with the dead battery.

9. Attach the cable at least 18 inches (45 cm) away from the dead battery, but not near engine parts that move. The electrical connection is just as good there, but the chance of sparks getting back to the battery is much less.






10. Now start the vehicle with the good battery and run the engine for a while.
11. Try to start the vehicle with the dead battery. If it won't start after a few tries, it probably needs service.
12. Remove the cables in reverse order to prevent electrical shorting. Take care that they don't touch each other or any other metal.

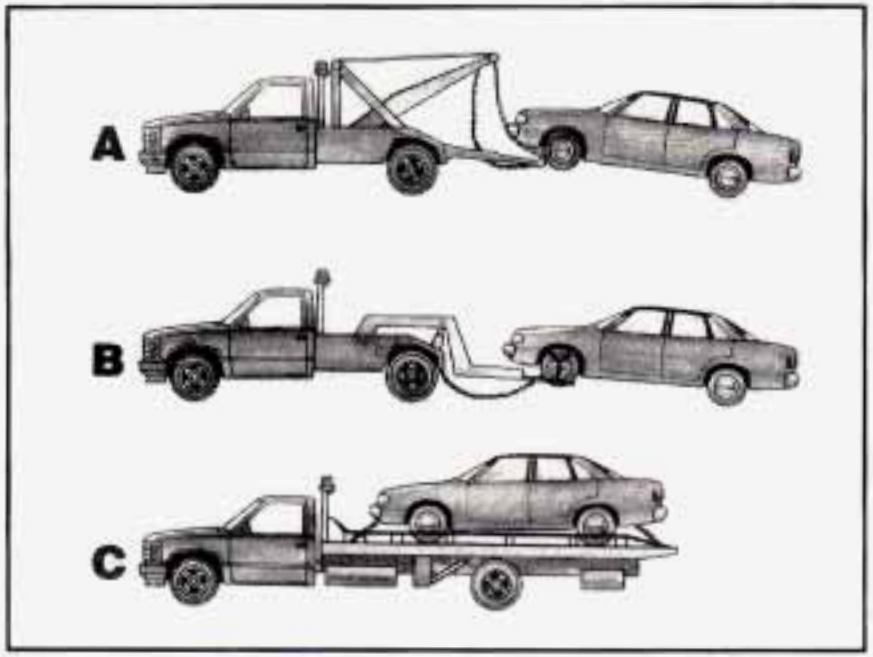
Remove cables in this order:

A. Heavy Metal Engine Part

B. Good Battery

C. Dead Battery

# Towing Your Buick




Try to have a GM dealer or a professional towing service tow your Buick. The usual towing equipment is a sling-type (**A**) or a wheel-lift (**B**) or car carrier (**C**) tow truck.

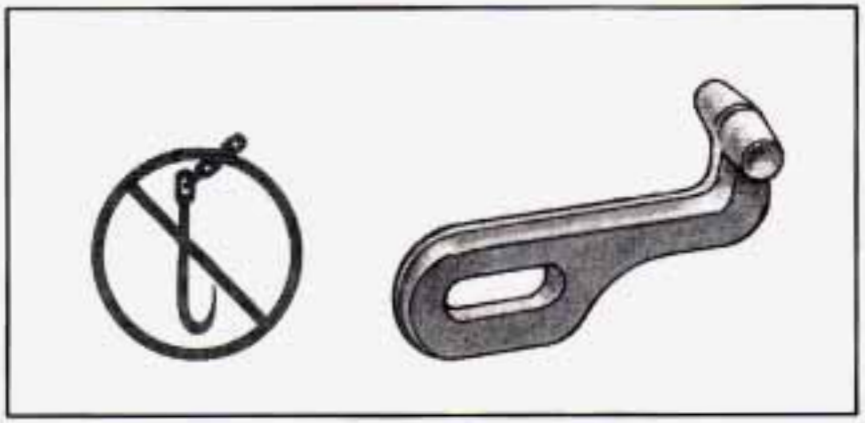
If your vehicle has been changed or modified since it was factory-new by adding aftermarket items like fog lamps, aero skirting, or special tires and wheels, these instructions and illustrations may not be correct.

Before you do anything, turn on the hazard warning flashers.

When you call, tell the towing service:

- That your vehicle has front-wheel drive.
- The make, model, and year of your vehicle.
- Whether you can still move the shift lever.
- If there was an accident, what was damaged.

When the towing service arrives, let the tow operator know that this manual contains detailed towing instructions and illustrations. The operator may want to see them.



## ⚠ CAUTION:

**To help avoid injury to you or others:**

- **Never let passengers ride in a vehicle that is being towed.**
- **Never tow faster than safe or posted speeds.**
- **Never tow with damaged parts not fully secured.**
- **Never get under your vehicle after it has been lifted by the tow truck.**
- **Always secure the vehicle on each side with separate safety chains when towing it.**
- **Never use J-hooks. Use T-hooks instead.**

When your vehicle is being towed, have the ignition key off. The steering wheel should be clamped in a straight-ahead position, with a clamping device designed for towing service. Do not use the vehicle's steering column lock for this. The transaxle should be in Neutral and the parking brake released.

Don't have your vehicle towed on the front wheels, unless you must. If the vehicle must be towed on the front wheels, *don't go more than 35 mph (56 km/h) or farther than 50 miles (80 km)*, or your transaxle will be damaged. If these limits must be exceeded, then the front wheels have to be supported on a dolly.

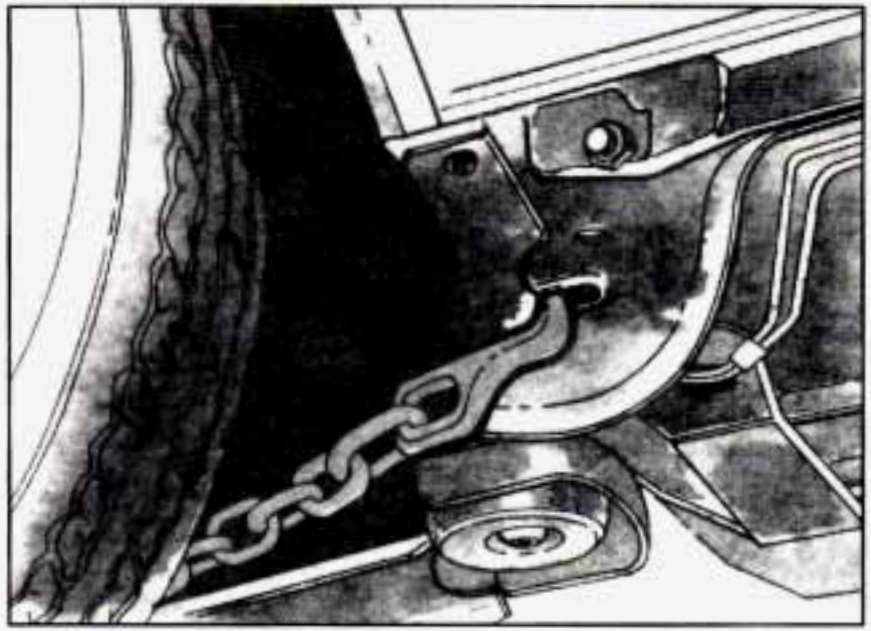
## ⚠ CAUTION:

**A vehicle can fall from a car carrier if it isn't adequately secured. This can cause a collision, serious personal injury and vehicle damage. The vehicle should be tightly secured with chains or steel cables before it is transported.**

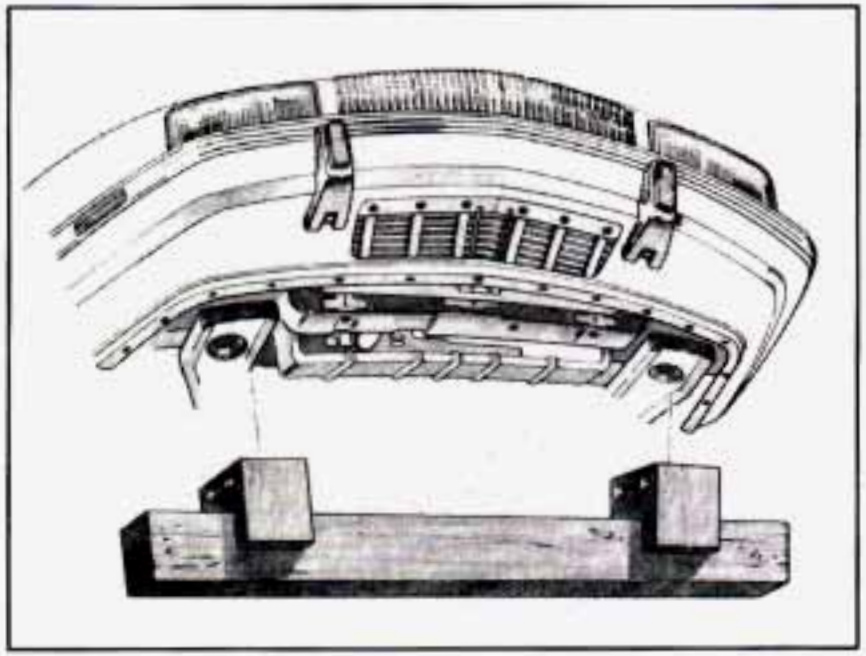
**Don't use substitutes (ropes, leather straps, canvas webbing, etc.) that can be cut by sharp edges underneath the towed vehicle. Always use T-hooks inserted in the T-hook slots. Never use J-hooks. They will damage drivetrain and suspension components.**

## Front Towing Hookups

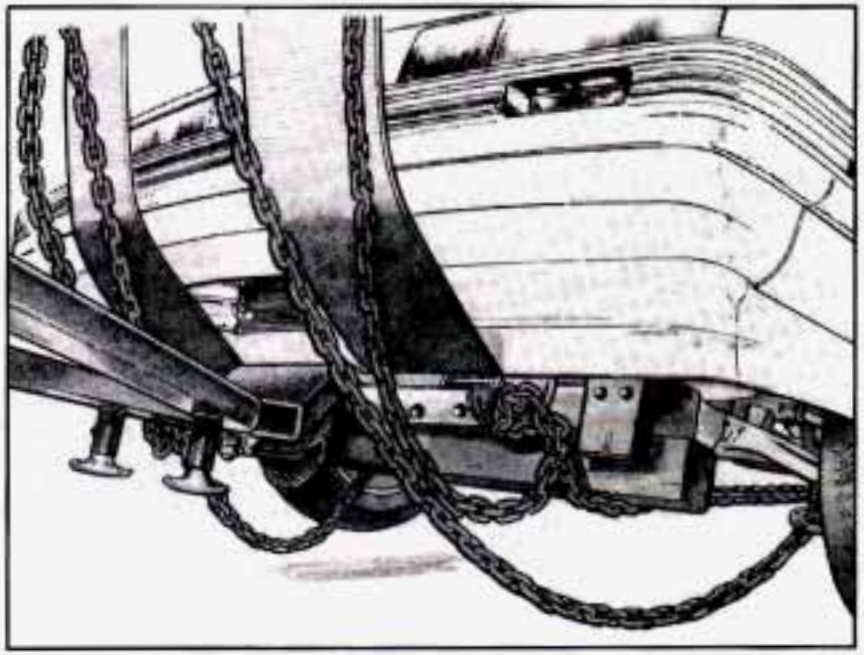
Before hooking up to a tow truck, be sure to read all the information in "Towing Your Buick" earlier in this part.



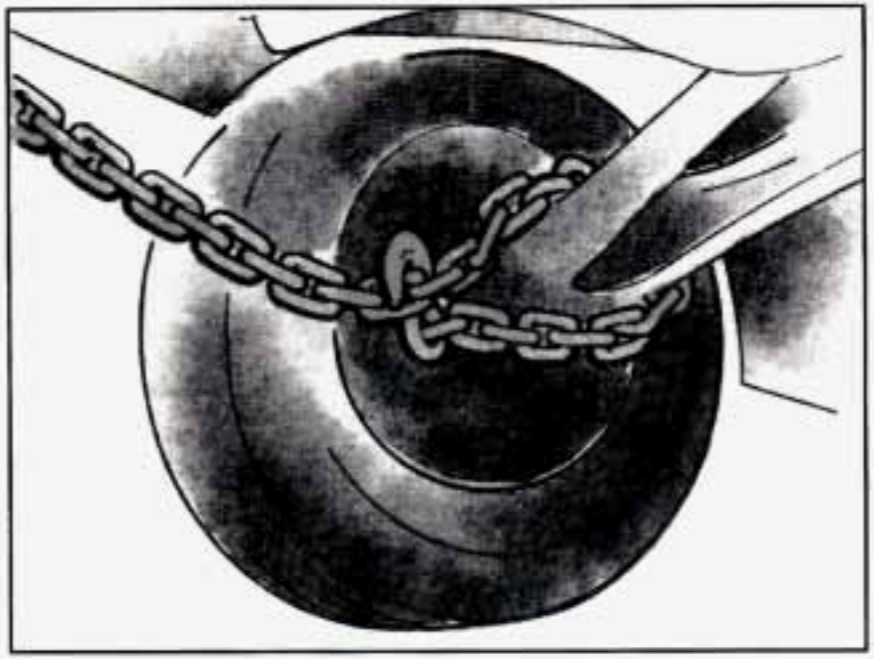
1. Attach T-hook chains behind the front wheels into the bottom of the floor pan on both sides.



2. Position a 4" x 4" wood beam across sling chains with spacer blocks contacting the forward extensions of the engine cradle.



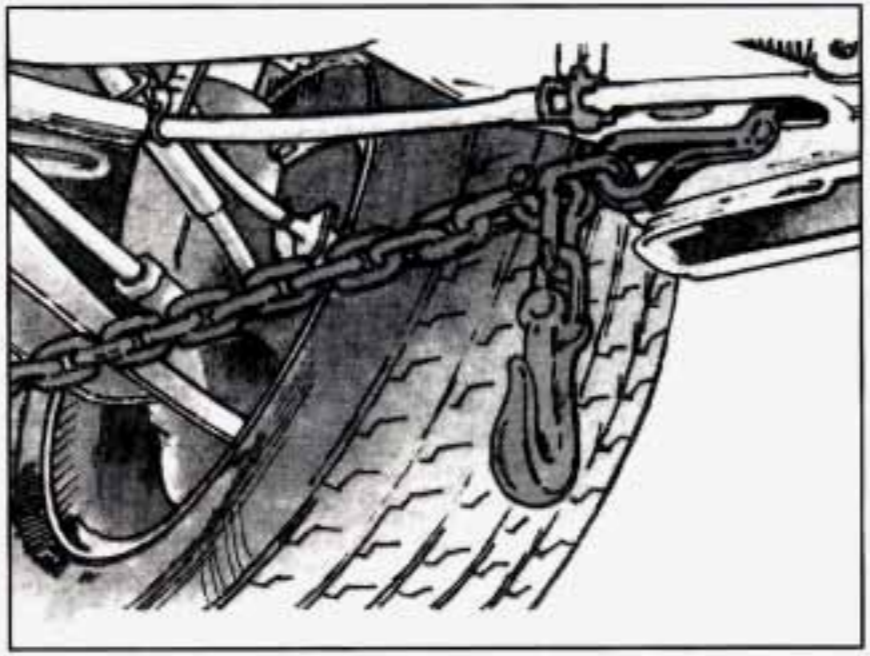
3. Position the lower sling crossbar halfway between the timber and the lower edge of the fascia.



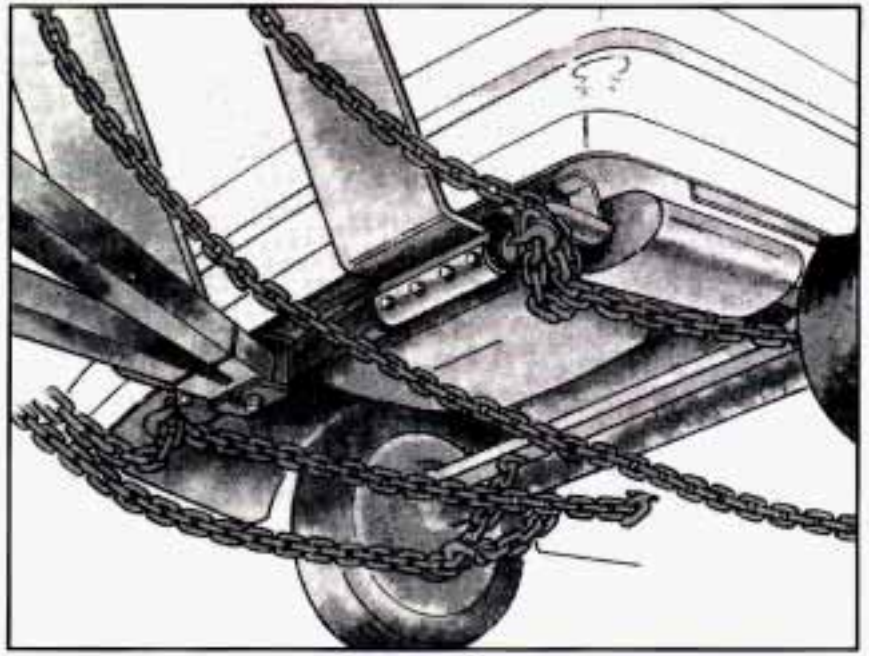
4. Attach a separate safety chain around the outboard end of each lower control arm.

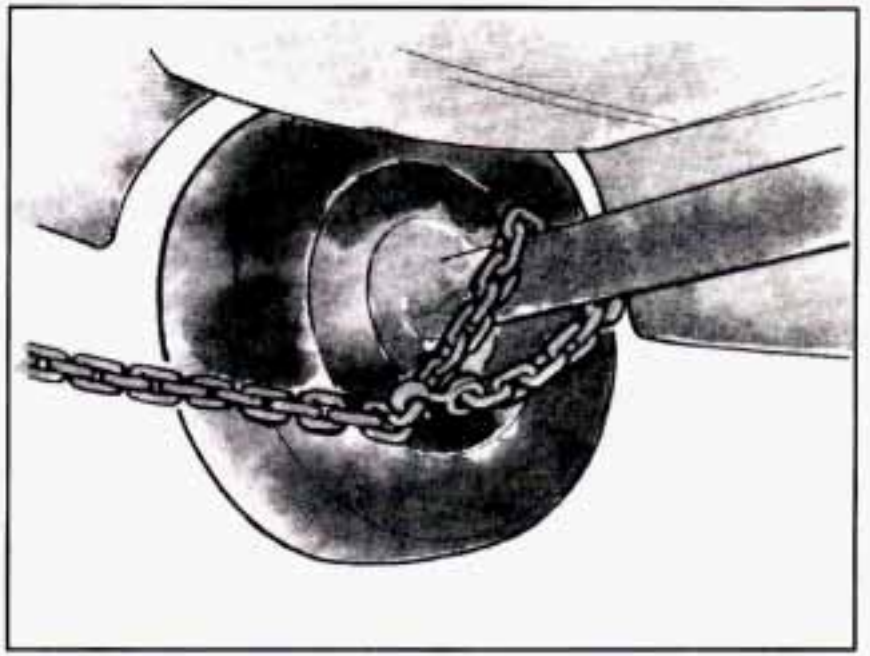
## Rear Towing Hookups

Before hooking up to a tow truck, be sure to read all the information in "Towing Your Buick" earlier in this part.



1. Attach T-hook chains on both sides in the slotted holes in the floor pan just ahead of the rear wheels.





2. Position the lower sling crossbar directly under the rear bumper.
3. Attach a separate safety chain to each side of the axle inboard of the spring.
4. Be certain your vehicle is towed no faster than 35 mph (56 km/h) and no farther than 50 miles (80 km) to avoid damage to your transaxle.

## Engine Overheating

You will find a coolant temperature gage or the warning light about a hot engine on your Buick's instrument panel.

### If Steam Is Coming From Your Engine

**⚠ CAUTION:**

**Steam from an overheated engine can burn you badly, even if you just open the hood. Stay away from the engine if you see or hear steam coming from it. Just turn it off and get everyone away from the vehicle until it cools down. Wait until there is no sign of steam or coolant before opening the hood.**

**If you keep driving when your engine is overheated, the liquids in it can catch fire. You or others could be badly burned. Stop your engine if it overheats, and get out of the vehicle until the engine is cool.**

**NOTICE:**

**If your engine catches fire because you keep driving with no coolant, your vehicle can be badly damaged. The costly repairs would not be covered by your warranty.**

### If No Steam Is Coming From Your Engine

If you get the overheat warning but see or hear no steam, the problem may not be too serious. Sometimes the engine can get a little too hot when you:

- Climb a long hill on a hot day.
- Stop after high speed driving.
- Idle for long periods in traffic.
- Tow a trailer.

If you get the overheat warning with no sign of steam, try this for a minute or so:

1. Turn off your air conditioner.
2. Turn on your heater to full hot at the highest fan speed and open the window as necessary.
3. If you're in a traffic jam, shift to NEUTRAL (N); otherwise, shift to the highest gear while driving -- AUTOMATIC OVERDRIVE (Ⓓ) or DRIVE (D).

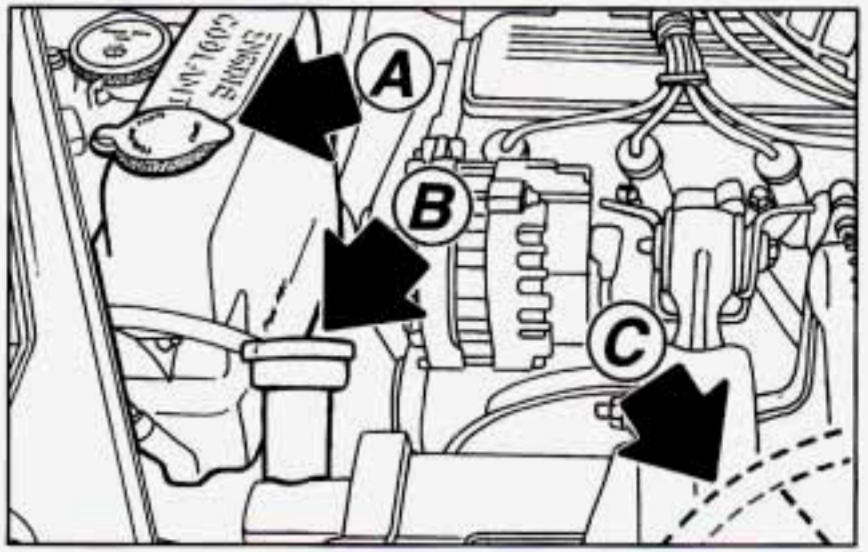
If you no longer have the overheat warning, you can drive. Just to be safe, drive slower for about ten minutes. If the warning doesn't come back on, you can drive normally.

If the warning continues, pull over, stop, and park your vehicle right away.

If there's still no sign of steam, you can idle the engine for two or three minutes while you're parked, to see if the warning stops. But then, if you still have the warning, *turn off the engine and get everyone out of the vehicle* until it cools down.

You may decide not to lift the hood but to get service help right away.

**2.2L L4 Cooling System**

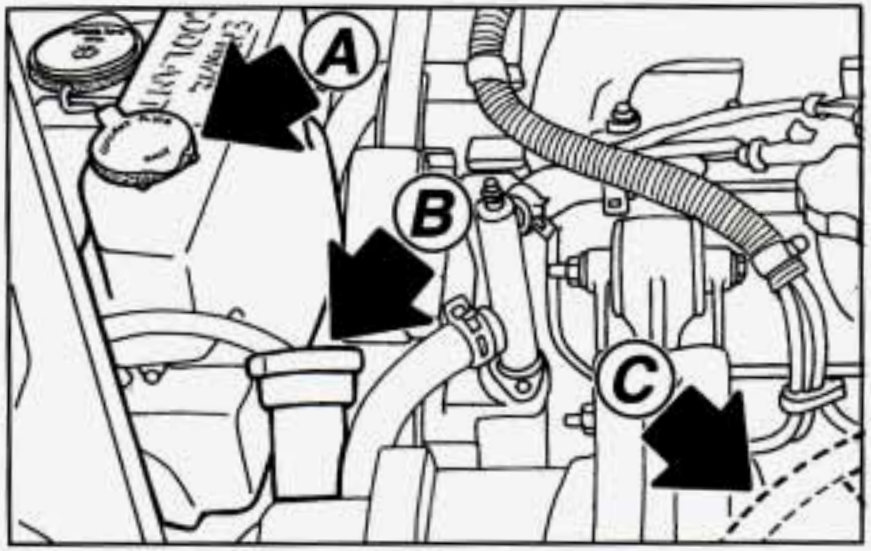



When you decide it's safe to lift the hood, here's what you'll see:

A. Coolant recovery tank

B. Radiator pressure cap

C. Electric engine fan




**A.** Coolant recovery tank

**B.** Radiator pressure cap

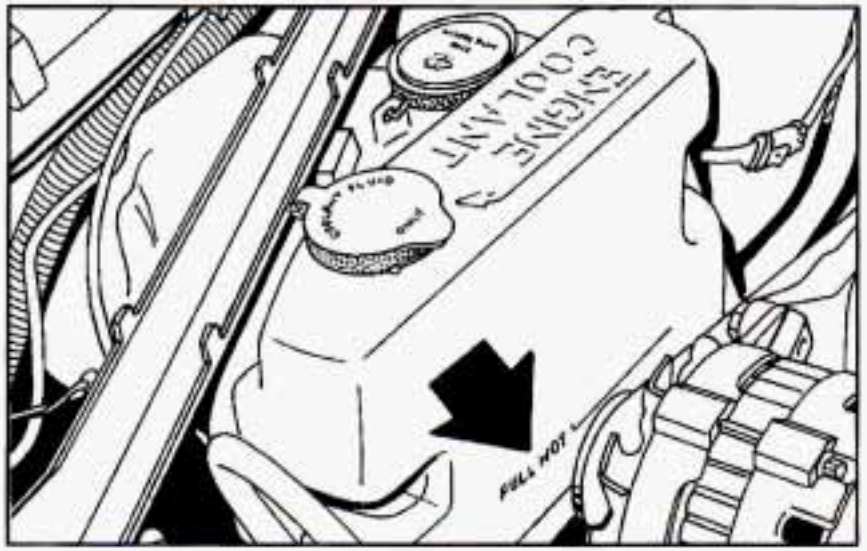
**C.** Electric engine fan

**⚠ CAUTION:**

**An electric fan under the hood can start up even when the engine is not running and can injure you. Keep hands, clothing and tools away from any underhood electric fan.**

If the coolant inside the coolant recovery tank is boiling, don't do anything else until it cools down.

**2.2L L4 Engine**




**3100 Engine**

The coolant level should be at the FULL HOT mark. If it isn't, you may have a leak in the radiator hoses, heater hoses, radiator, water pump or somewhere else in the cooling system.

**⚠ CAUTION:**

**Heater and radiator hoses, and other engine parts, can be very hot. Don't touch them. If you do, you can be burned.**

**Don't run the engine if there is a leak. If you run the engine, it could lose all coolant. That could cause an engine fire, and you could be burned. Get any leak fixed before you drive the vehicle.**

**NOTICE:**

**Engine damage from running your engine without coolant isn't covered by your warranty.**

If there seems to be no leak, with the engine on, check to see if the electric engine fan is running. If the engine is overheating, both fan(s) should be running. If it isn't, your vehicle needs service.

## How to Add Coolant to the Coolant Recovery Tank

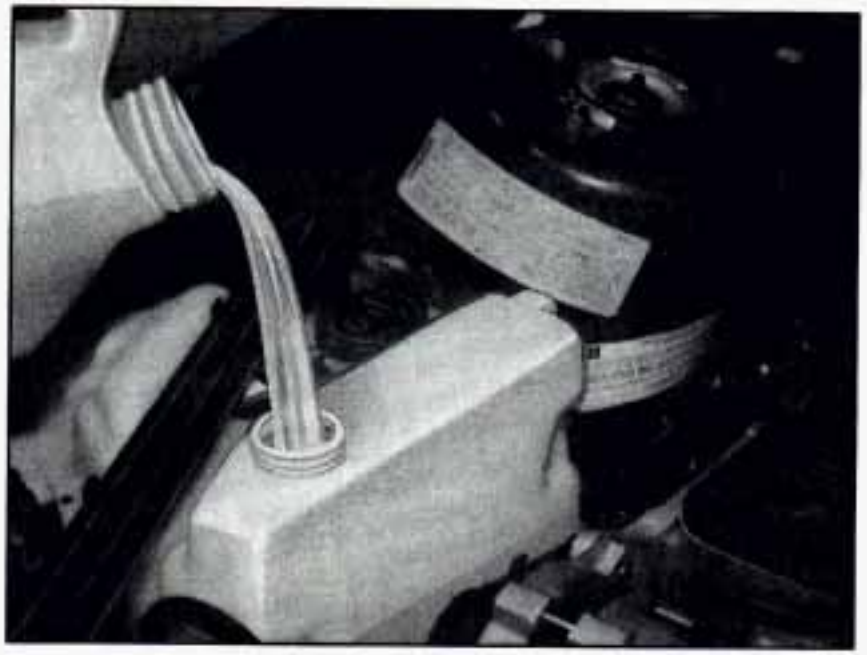
If you haven't found a problem yet, but the coolant level isn't at ADD, add a 50/50 mixture of *clean water* (preferably distilled) and a proper antifreeze at the coolant recovery tank. (See "Engine Coolant" in the Index for more information about the proper coolant mix.)

**⚠ CAUTION:**

**Adding only plain water to your cooling system can be dangerous. Plain water, or some other liquid like alcohol, can boil before the proper coolant mix will. Your vehicle's coolant warning system is set for the proper coolant mix. With plain water or the wrong mix, your engine could get too hot but you wouldn't get the overheat warning. Your engine could catch fire and you or others could be burned. Use a 50/50 mix of clean water and a proper antifreeze.**

## NOTICE:

**In cold weather, water can freeze and crack the engine, radiator, heater core and other parts. Use the recommended coolant.**



## ⚠ CAUTION:

**You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Don't spill coolant on a hot engine.**

When the coolant in the coolant recovery tank is at the FULL HOT, start your vehicle.

If the overheat warning continues, there's one more thing you can try. You can add the proper coolant mix directly to the radiator, but be sure the cooling system is cool before you do it.

## ⚠ CAUTION:

**Steam and scalding liquids from a hot cooling system can blow out and burn you badly. They are under pressure, and if you turn the radiator pressure cap -- even a little -- they can come out at high speed. Never turn the cap when the cooling system, including the radiator pressure cap, is hot. Wait for the cooling system and radiator pressure cap to cool if you ever have to turn the pressure cap.**

## How to Add Coolant to the Radiator

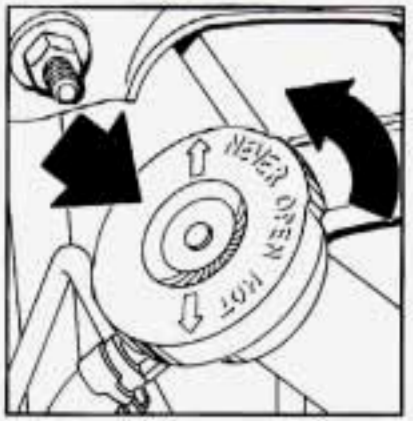
**NOTICE:**

**Your engine has a specific radiator fill procedure. Failure to follow this procedure could cause your engine to overheat and be severely damaged.**

1. You can remove the radiator pressure cap when the cooling system, including the radiator pressure cap and upper radiator hose, is no longer hot.

Turn the pressure cap slowly to the left until it first stops. (Don't press down while turning the pressure cap.)

If you hear a hiss, wait for that to stop. A hiss means there is still some pressure left.

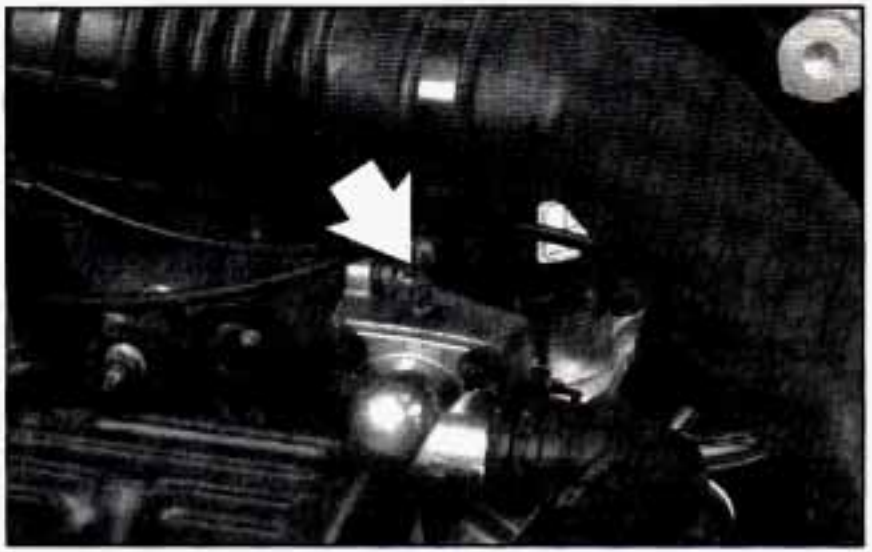



2. Then keep turning the pressure cap, but now push down as you turn it. Remove the pressure cap.

**⚠ CAUTION:**

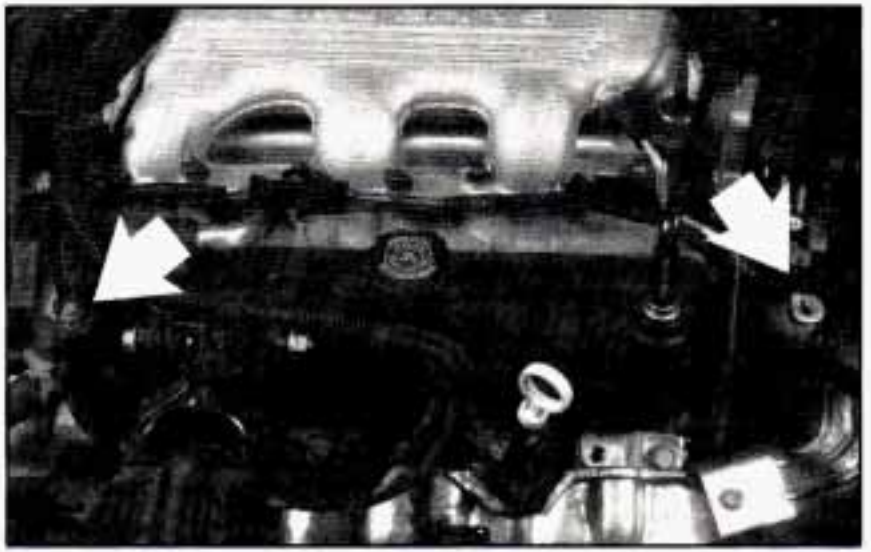
**You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol and it will burn if the engine parts are hot enough. Don't spill coolant on a hot engine.**

**2.2 L Engine**



The 2.2L (VIN Code 4) has one bleed valve located at the thermostat housing.

**3100 Engine**



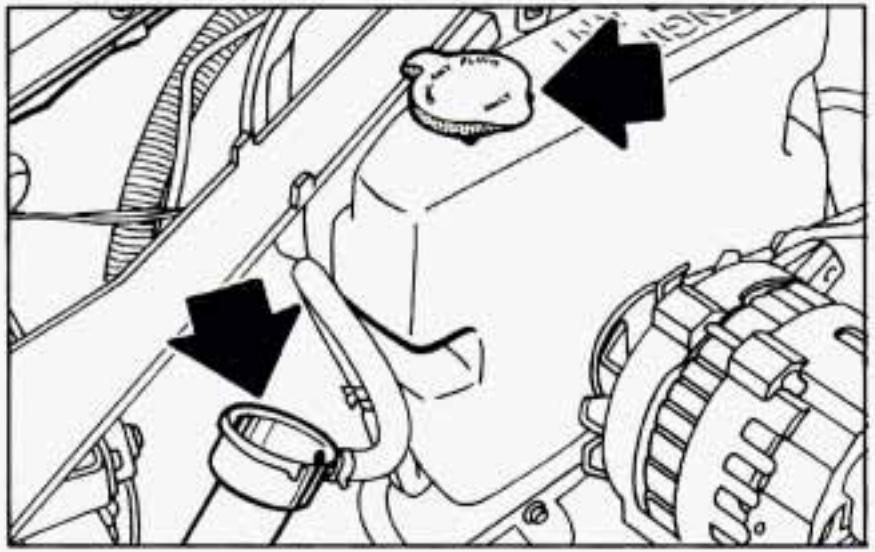
3.1L V6 (VIN Code M): There are two bleed valves. One is located on the thermostat housing. The other is located on the thermostat bypass tube.

3. Fill the radiator with the proper mix, up to the base of the filler neck.

   If you see a stream of coolant coming from an air bleed valve, close the valve. Otherwise, close the valves after the radiator is filled.

4. Rinse or wipe any spilled coolant from the engine and compartment.

5. Then fill the coolant recovery tank to the FULL HOT mark.



6. Put the cap back on the coolant recovery tank, but leave the radiator pressure cap off.

7. Start the engine and let it run until you can feel the upper radiator hose getting hot. Watch out for the engine fan.

8. By this time the coolant level inside the radiator filler neck may be lower. If the level is lower, add more of the proper mix through the filler neck until the level reaches the base of the filler neck.

9. Then replace the pressure cap. At any time during this procedure if coolant begins to flow out of the filler neck, reinstall the pressure cap. Be sure the arrows on the pressure cap line up like this.

10. Check the coolant in the recovery tank. The level in the coolant recovery tank should be at the HOT mark when the engine is hot or at the COLD mark when the engine is cold.

## If a Tire Goes Flat

It's unusual for a tire to "blow out" while you're driving, especially if you maintain your tires properly. If air goes out of a tire, it's much more likely to leak out slowly. But if you should ever have a "blowout," here are a few tips about what to expect and what to do:

If a front tire fails, the flat tire will create a drag that pulls the vehicle toward that side. Take your foot off the accelerator pedal and grip the steering wheel firmly. Steer to maintain lane position, then gently brake to a stop well out of the traffic lane.

A rear blowout, particularly on a curve, acts much like a skid and may require the same correction you'd use in a skid. In any rear blowout, remove your foot from the accelerator pedal. Get the vehicle under control by steering the way you want the vehicle to go. It may be very bumpy and noisy, but you can still steer. Gently brake to a stop, well off the road if possible.

If a tire goes flat, the next part shows how to use your jacking equipment to change a flat tire safely.

# Changing a Flat Tire

If a tire goes flat, avoid further tire and wheel damage by driving slowly to a level place. Turn on your hazard warning flashers.

**⚠ CAUTION:**

**Changing a tire can cause an injury. The vehicle can slip off the jack and roll over you or other people. You and they could be badly injured. Find a level place to change your tire. To help prevent the vehicle from moving:**

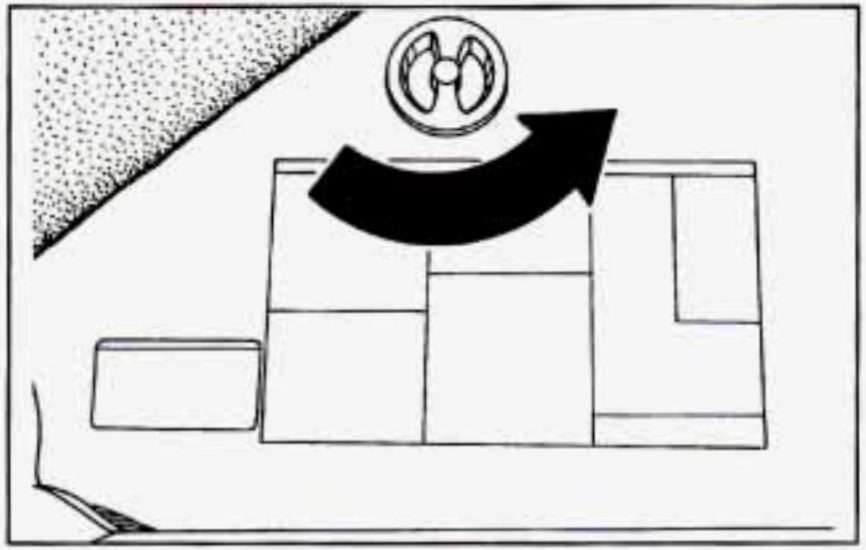
1. **Set the parking brake firmly.**
2. **Put the shift lever in PARK (P).**
3. **Turn off the engine.**

**To be even more certain the vehicle won't move, you can put blocks at the front and rear of the tire farthest away from the one being changed. That would be the tire on the other side of the vehicle, at the opposite end.**

The following steps will tell you how to use the jack and change a tire.

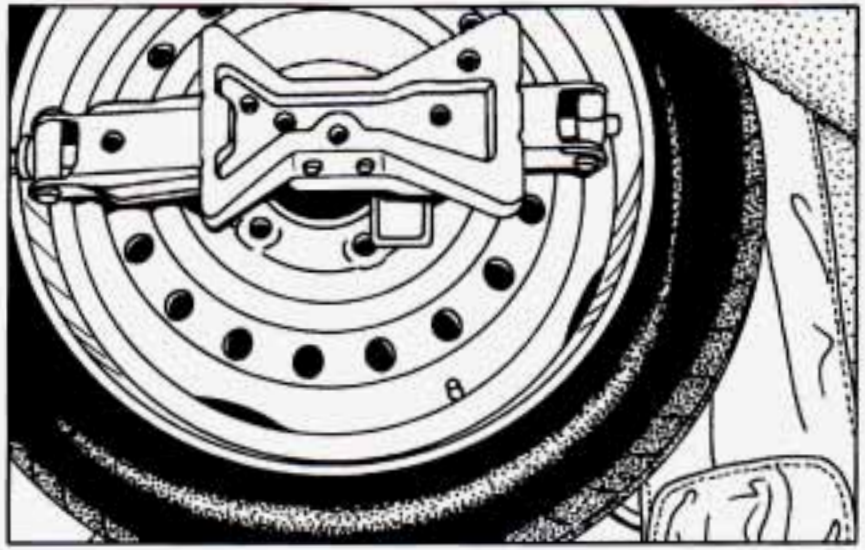
Some steps apply to all models, others to just the Sedan or Wagon models. Follow the steps listed for your vehicle.

**Sedan**



The equipment you'll need is stored in the trunk.

1. Pull the carpeting from the floor of the trunk.
2. Turn the center retainer bolt on the compact spare tire housing counterclockwise to remove it, then lift the tire cover.

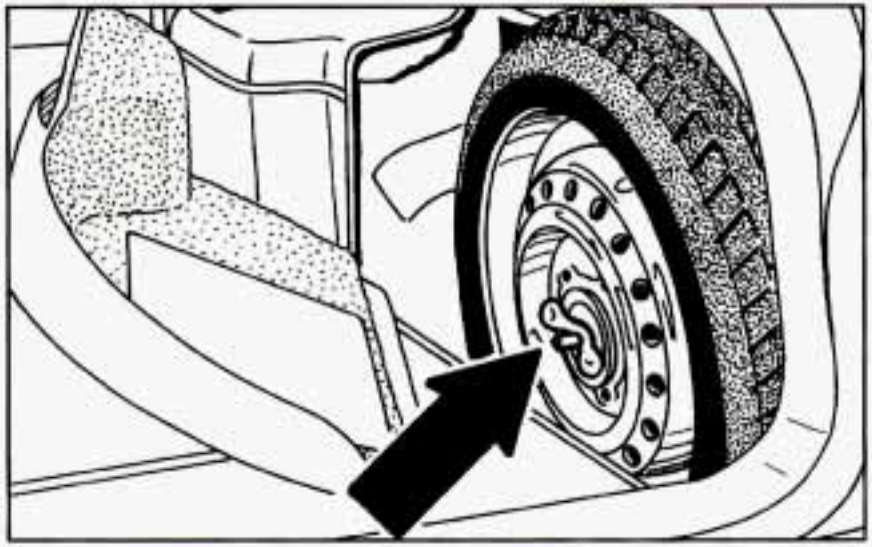


3. Lift off the jack and remove the spare tire.
4. Remove the wheel wrench from the bag.

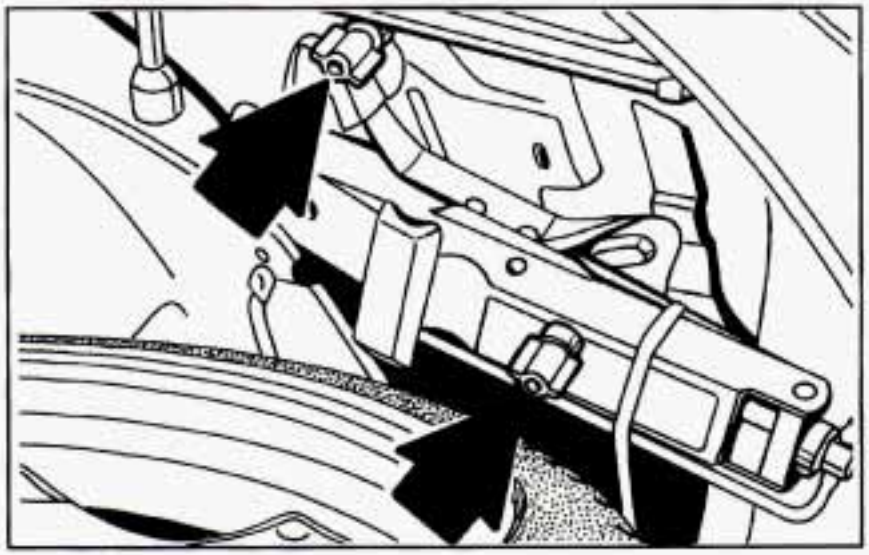
**Wagon**

The equipment you'll need is stored in the rear of your vehicle.

1. Fold down the third seat, if so equipped. Then remove the housing that covers the spare tire by carefully pushing in on the top edge of the cover and pulling it away from the vehicle. Then lift up.

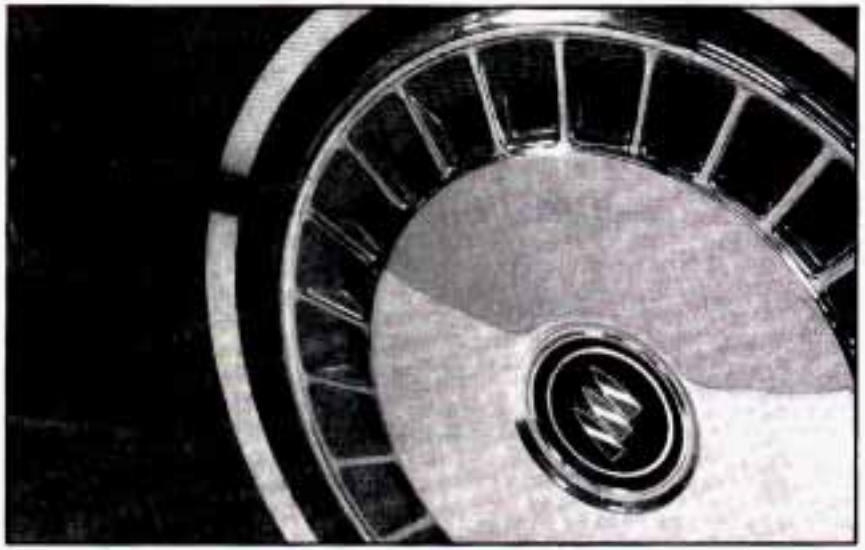


2. Remove the wing nut from the center of the spare tire and remove the adapter.
3. Remove the spare tire.



4. Turn the two wing nuts counterclockwise and remove the jack retainer plate. Then pull out the jack and wheel wrench.

**Standard Wheel Cover**

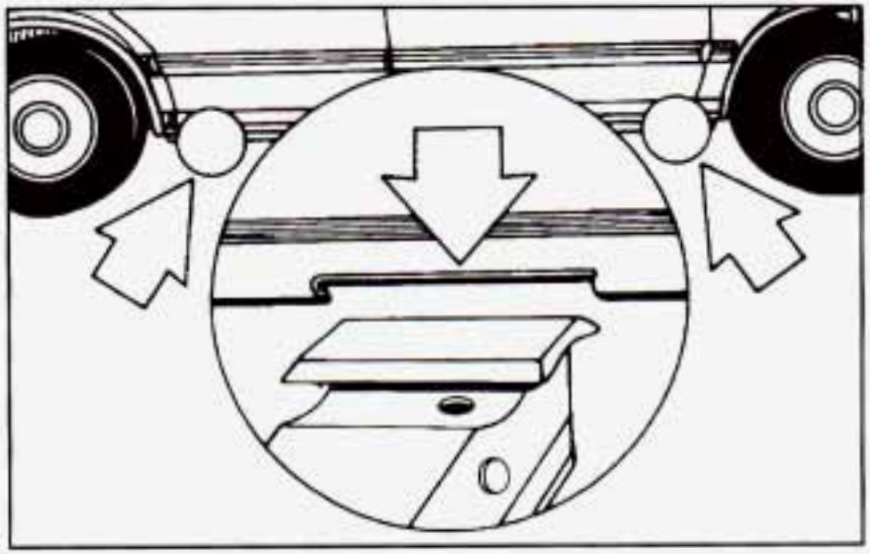


You will be using the flat end of the wheel wrench to remove the wheel cover. Pry along the edge of the wheel cover until it comes off.

**Wire Wheel Cover**

Removing the wire wheel cover requires this wire wheel key wrench.

A. Put the flat end into the notch and carefully pry the small center cover off.



B. Remove the theft deterrent wheel nut by placing the key end of the wire wheel wrench over the nut and turning it to the left. Pull off the wire wheel cover.

C. Next, attach the wheel wrench to the bolt on the end of the jack. Raise the jack a little by rotating the wheel wrench clockwise (to the right).

5. Using the wheel wrench, loosen all the wheel nuts. Don't remove them yet.

6. Position the jack under the vehicle nearest the tire to be changed. The jack location should be approximately five inches (12.7 cm) from the wheel well.

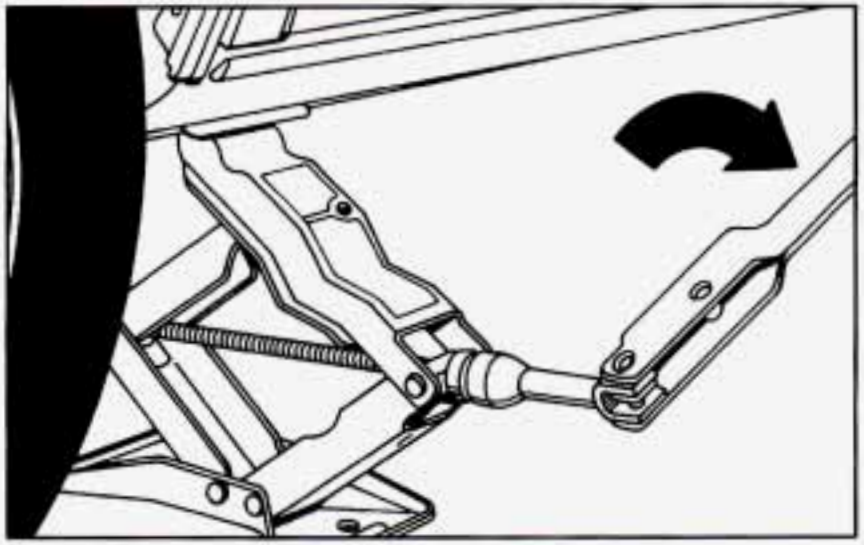
**⚠ CAUTION:**

**Getting under a vehicle when it is jacked up is dangerous. If the vehicle slips off the jack, you could be badly injured or killed. Never get under a vehicle when it is supported only by a jack.**

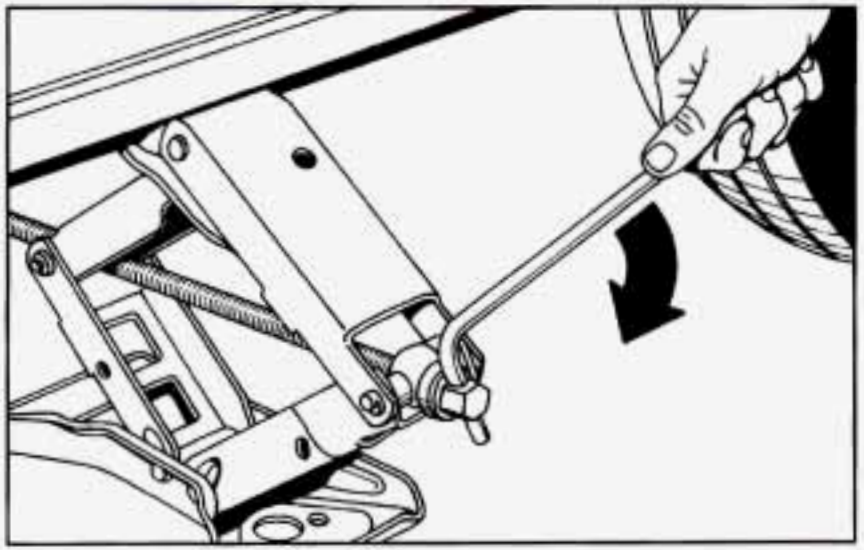
## NOTICE:

**Raising your vehicle with the jack improperly positioned will damage the vehicle or may allow the vehicle to fall off the jack. Be sure to fit the jack lift head into the proper location before raising your vehicle.**

**Sedan**



**Wagon**



7. Raise the vehicle by rotating the wheel wrench clockwise. Raise the vehicle far enough off the ground for the spare tire to fit.
8. Then remove all the wheel nuts and take off the flat tire.

**⚠ CAUTION:**

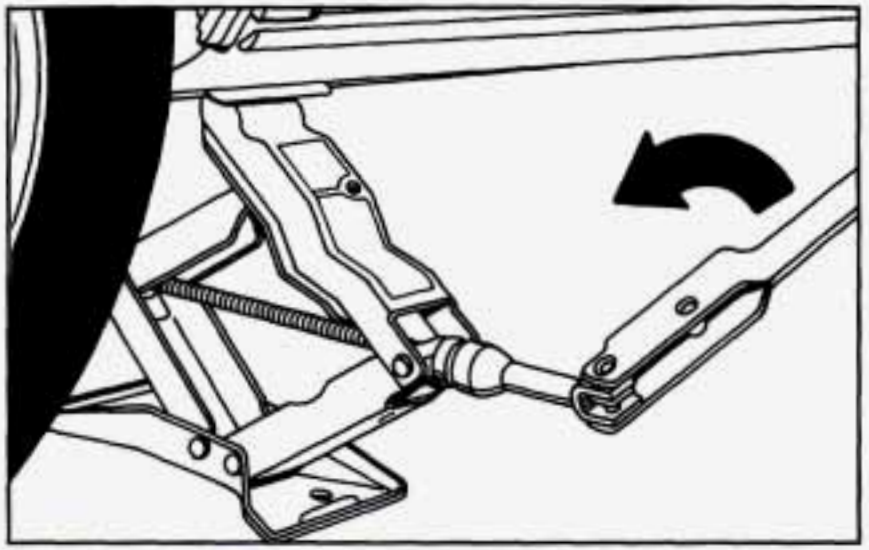
**Rust or dirt on the wheel, or on the parts to which it is fastened, can make the wheel nuts become loose after a time. The wheel could come off and cause an accident. When you change a wheel, remove any rust or dirt from the places where the wheel attaches to the vehicle. In an emergency, you can use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if you need to, to get all the rust or dirt off.**

Remove any rust or dirt from the wheel bolts, mounting surfaces and spare wheel. Place the spare on the wheel mounting surface.

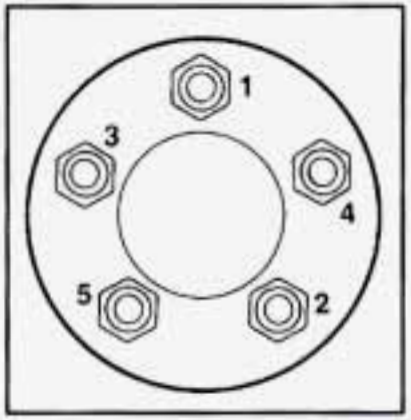
**⚠ CAUTION:**

**Never use oil or grease on studs or nuts. If you do, the nuts might come loose. Your wheel could fall off, causing a serious accident.**

9. Place the spare on the wheel mounting surface.
10. Replace the wheel nuts with the rounded end of the nuts toward the wheel. Tighten each nut by hand until the wheel is held against the hub.



11. Lower the vehicle by rotating the wheel wrench counterclockwise. Lower the jack completely.




12. Tighten the wheel nuts firmly in a criss-cross sequence as shown.

**⚠ CAUTION:**

**Incorrect wheel nuts or improperly tightened wheel nuts can cause the wheel to become loose and even come off. This could lead to an accident. Be sure to use the correct wheel nuts. If you have to replace them, be sure to get the right kind.**

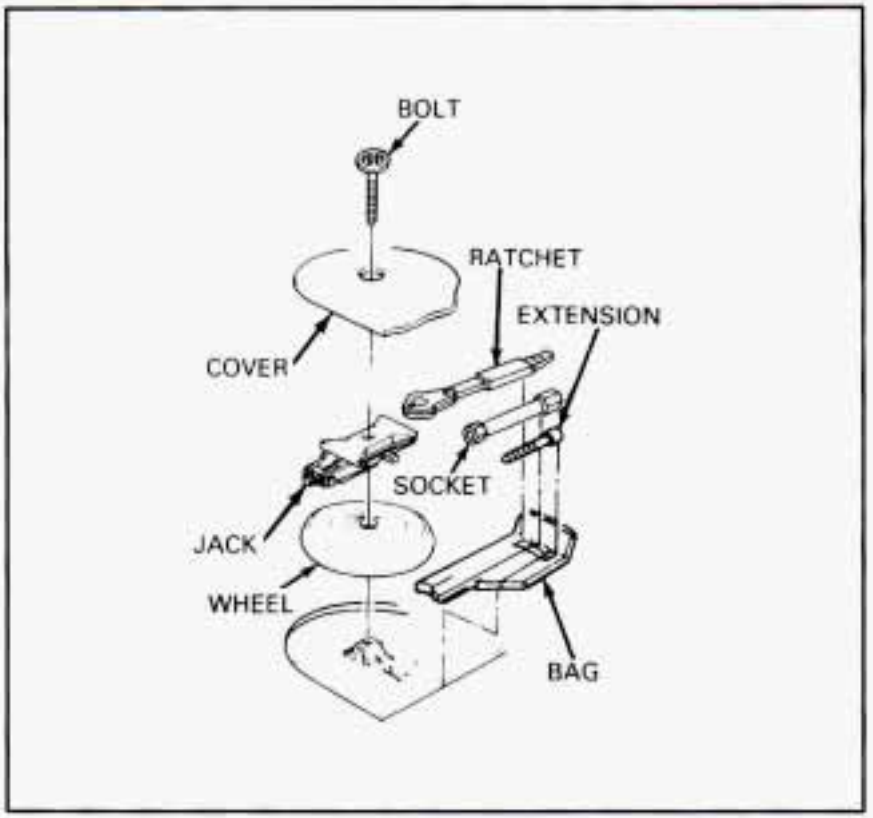
**Stop somewhere as soon as you can and have the nuts tightened with a torque wrench to 100 lb. ft. (140 N·m).**

Don't try to put a wheel cover on your compact spare tire. It won't fit. Store the wheel cover in the trunk or, if you have the wagon, in the rear cargo area, until you have the flat tire repaired or replaced.

**NOTICE:**

**Wheel covers won't fit on your compact spare. If you try to put a wheel cover on your compact spare, you could damage the cover or the spare.**

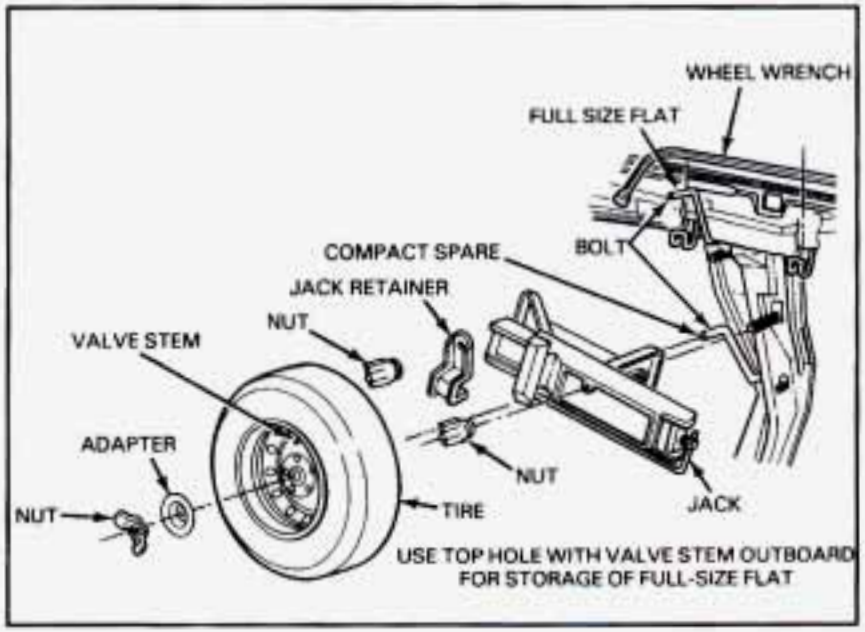
**Sedan (Securing the Flat Tire)**




1. Place the flat tire, air valve up, in the tire storage area.
2. Remove the extension bolt from the jacking tools bag. Secure the tire by inserting and tightening the extension bolt through the center of the tire into the storage area floor.
3. Place the spare tire cover on the storage area, with the jack face down over the hole in the center of the board.
4. Insert the center retainer bolt through the jack and secure it by turning the bolt clockwise.

The cover will not fit flush when a flat tire is stored in this location.

**Wagon (Securing the Flat Tire)**




The cover will not fit when a flat tire is stored in this location.

1. Store the wheel well cover in the floor compartment.
2. Remove the tire retaining bolt from under the jack and position it in the slot above the jack.
3. With the air valve facing you, place the flat tire in the storage area.
4. Insert the bolt through the top wheel stud hole in the wheel.
5. Place the spacer over the bolt and tighten the wing nut.

**⚠ CAUTION:**

**Storing a jack, a tire or other equipment in the passenger compartment of the vehicle could cause injury. In a sudden stop or collision, loose equipment could strike someone. Store all these in the proper place.**

## Wagon Spare Cover Replacement

To install the spare tire cover in your station wagon when you are finished changing the tire:

1. Put the front lower corner of the cover into the floor track. Overlap the lower rear edge of the front panel one to two inches.
2. Slide the cover to the front; the tabs must go *under* the rear edge.
3. Insert the front upper corner into the track, at the bottom of the glass.
4. Adjust the position of the cover to fit over the weatherstrip. Push the panel down into the track in the floor.
5. Push the panel to lock it into the track of the molding at the bottom of the glass.

# Compact Spare Tire

Although the compact spare was fully inflated when your vehicle was new, it can lose air after a time. Check the inflation pressure regularly. It should be 60 psi (420 kPa). After installing the compact spare on your vehicle, you should stop as soon as possible and make sure your spare tire is correctly inflated. The compact spare is made to perform well at posted speed limits for distances up to 3,000 miles (5 000 km), so you can finish your trip and have your full-size tire repaired or replaced where you want. Of course, it's best to replace your spare with a full-size tire as soon as you can. Your spare will last longer and be in good shape in case you need it again.

## NOTICE:

**Don't take your compact spare through an automatic car wash with guide rails. The compact spare can get caught on the rails. That can damage the tire and wheel, and maybe other parts of your vehicle.**

Don't use your compact spare on some other vehicle.

And don't mix your compact spare or wheel with other wheels or tires. They won't fit. Keep your spare and its wheel together.

**NOTICE:**

**Tire chains won't fit your compact spare. Using them will damage your vehicle and destroy the chains too. Don't use tire chains on your compact spare.**

## If You're Stuck: In Sand, Mud, Ice or Snow

What you don't want to do when your vehicle is stuck is to spin your wheels too fast. The method known as "rocking" can help you get out when you're stuck, but you must use caution.

**⚠ CAUTION:**

**If you let your tires spin at high speed, they can explode and you or others could be injured. And, the transaxle or other parts of the vehicle can overheat. That could cause an engine compartment fire or other damage. When you're stuck, spin the wheels as little as possible. Don't spin the wheels above 35 mph (55 km/h) as shown on the speedometer.**

## NOTICE:

**Spinning your wheels can destroy parts of your vehicle as well as the tires. If you spin the wheels too fast while shifting your transaxle back and forth, you can destroy your transaxle.**

For information about using tire chains on your vehicle, see "Tire Chains" in the Index.

**Rocking your vehicle to get it out:**

First, turn your steering wheel left and right. That will clear the area around your front wheels. Then shift back and forth between REVERSE (R) and a forward gear, spinning the wheels as little as possible. Release the accelerator pedal while you shift, and press lightly on the accelerator pedal when the transaxle is in gear. If that doesn't get you out after a few tries, you may need to be towed out. If you do need to be towed out, see "Towing Your Car" in the Index.

## NOTES

# Section 6 Service and Appearance Care

Here you will find information about the care of your Buick. This section begins with service and fuel information, and then it shows how to check important fluid and lubricant levels. There is also technical information about your vehicle, and a part devoted to its appearance care.

## Service

Your Buick dealer knows your vehicle best and wants you to be happy with it. We hope you'll go to your dealer for all your service needs. You'll get genuine GM parts and GM-trained and supported service people.

We hope you'll want to keep your GM vehicle all GM. Genuine GM parts have one of these marks:

## Doing Your Own Service Work

If you want to do some of your own service work, you'll want to get the proper Buick Service Manual. It tells you much more about how to service your Buick than this manual can. To order the proper service manual, see "Service Publications" in the Index.

Your vehicle has an air bag system. Before attempting to do your own service work, see "Servicing Your Air Bag-Equipped Buick" in the Index.

You should keep a record with all parts receipts and list the mileage and the date of any service work you perform. See "Maintenance Record" in the Index.

## ⚠ CAUTION:

**You can be injured if you try to do service work on a vehicle without knowing enough about it.**

- **Be sure you have sufficient knowledge, experience, and the proper replacement parts and tools before you attempt any vehicle maintenance task.**
- **Be sure to use the proper nuts, bolts and other fasteners. "English" and "metric" fasteners can be easily confused. If you use the wrong fasteners, parts can later break or fall off. You could be hurt.**

## NOTICE:

**If you try to do your own service work without knowing enough about it, your vehicle could be damaged.**

# Fuel

Use regular unleaded gasoline rated at 87 octane or higher. It should meet specifications ASTM D4814 in the United States and CGSB 3.5-92 in Canada. These fuels should have the proper additives, so you should not have to add anything to the fuel.

In the United States and Canada, it's easy to be sure you get the right kind of gasoline (unleaded). You'll see UNLEADED right on the pump. And only unleaded nozzles will fit into your vehicle's filler neck.

Be sure the posted octane is at least 87. If the octane is less than 87, you may get a heavy knocking noise when you drive. If it's bad enough, it can damage your engine.

If you're using fuel rated at 87 octane or higher and you still hear heavy knocking, your engine needs service. But don't worry if you hear a little pinging noise when you're accelerating or driving up a hill. That's normal, and you don't have to buy a higher octane fuel to get rid of pinging. It's the heavy, constant knock that means you have a problem.

What about gasoline with blending materials that contain oxygen (oxygenates), such as MTBE or alcohol?

*MTBE* is "methyl tertiary-butyl ether." Fuel that is no more than 15% MTBE is fine for your vehicle.

*Ethanol* is ethyl or grain alcohol. Properly-blended fuel that is no more than 10% *ethanol* is fine for your vehicle.

*Methanol* is methyl or wood alcohol.

**NOTICE:**

**Fuel that is more than 5% methanol is bad for your vehicle. Don't use it. It can corrode metal parts in your fuel system and also damage plastic and rubber parts. That damage wouldn't be covered under your warranty. And even at 5% or less, there must be "cosolvents" and corrosion preventers in this fuel to help avoid these problems.**

## Gasolines for Cleaner Air

Your use of gasoline with deposit control additives will help prevent deposits from forming in your engine and fuel system. That helps keep your engine in tune and your emission control system working properly. It's good for your vehicle, and you'll be doing your part for cleaner air.

Many gasolines are now blended with oxygenates. General Motors recommends that you use gasolines with these blending materials, such as MTBE and ethanol. By doing so, you can help clean the air, especially in those parts of the country that have high carbon monoxide levels.

In addition, some gasoline suppliers are now producing reformulated gasolines. These gasolines are specially designed to reduce vehicle emissions. General Motors recommends that you use reformulated gasoline. By doing so, you can help clean the air, especially in those parts of the country that have high ozone levels.

You should ask your service station operators if their gasolines contain deposit control additives and oxygenates, and if they have been reformulated to reduce vehicle emissions.

## Fuels in Foreign Countries

If you plan on driving in another country outside the U.S. or Canada, unleaded fuel may be hard to find. Do not use leaded gasoline. If you use even one tankful, your emission controls won't work well or at all. With continuous use, spark plugs can get fouled, the exhaust system can corrode, and your engine oil can deteriorate quickly. Your vehicle's oxygen sensor will be damaged. All of that means costly repairs that wouldn't be covered by your warranty.

To check on fuel availability, ask an auto club, or contact a major oil company that does business in the country where you'll be driving.

You can also write us at the following address for advice. Just tell us where you're going and give your Vehicle Identification Number (VIN).

General Motors Overseas Distribution Corporation,
North American Export Sales (NAES)
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

## Filling Your Tank

**Fuel Capacity:** 16.5 gallons (62.4L). Use unleaded fuel only.

## ⚠ CAUTION:

**Gasoline vapor is highly flammable. It burns violently, and that can cause very bad injuries. Don't smoke if you're near gasoline or refueling your vehicle. Keep sparks, flames, and smoking materials away from gasoline.**

The cap is behind a hinged door on the left side of your vehicle.

To take off the cap, turn it slowly to the left (counterclockwise).

## ⚠ CAUTION:

**If you get gasoline on yourself and then something ignites it, you could be badly burned. Gasoline can spray out on you if you open the fuel filler cap too quickly. This spray can happen if your tank is nearly full, and is more likely in hot weather. Open the fuel filler cap slowly and wait for any "hiss" noise to stop. Then unscrew the cap all the way.**

Be careful not to spill gasoline. Clean gasoline from painted surfaces as soon as possible. See "Cleaning the Outside of Your Buick" in the Index.

When you put the cap back on, turn it to the right until you hear at least three clicks.

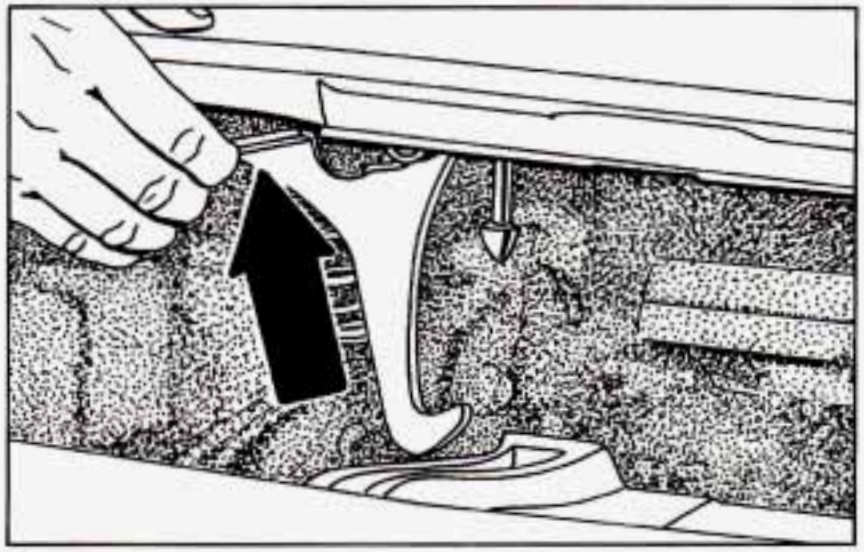
## NOTICE:

**If you need a new cap, be sure to get the right type. Your dealer can get one for you. If you get the wrong type, it may not fit or have proper venting, and your fuel tank and emissions system might be damaged.**

# Checking Things Under the Hood

## Hood Release

To open the hood, first pull the handle inside the vehicle. It is located on the lower left side of the instrument panel.



Then go to the front of the vehicle and release the secondary hood release.

Lift the hood.

**⚠ CAUTION:**

**An electric fan under the hood can start up and injure you even when the engine is not running. Keep hands, clothing and tools away from any underhood electric fan.**

**⚠ CAUTION:**

**Things that burn can get on hot engine parts and start a fire. These include liquids like gasoline, oil, coolant, brake fluid, windshield washer and other fluids, and plastic or rubber. You or others could be burned. Be careful not to drop or spill things that will burn onto a hot engine.**

Before closing the hood, be sure all the filler caps are on properly. Then just pull the hood down and close it firmly.

## Underhood Lamp

Your underhood lamp is designed to come on whenever you raise the hood, and either the parking lamps or headlamps are on.

## Engine Oil

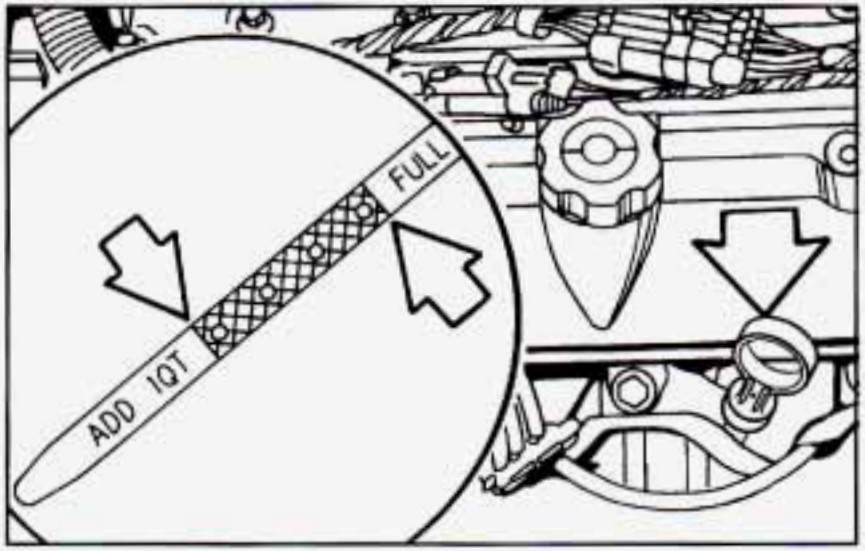
It's a good idea to check your engine oil every time you get fuel. In order to get an accurate reading, the oil must be warm and the vehicle must be on level ground.

Turn off the engine and give the oil a few minutes to drain back into the oil pan. If you don't, the oil dipstick might not show the actual level.

### To Check Engine Oil

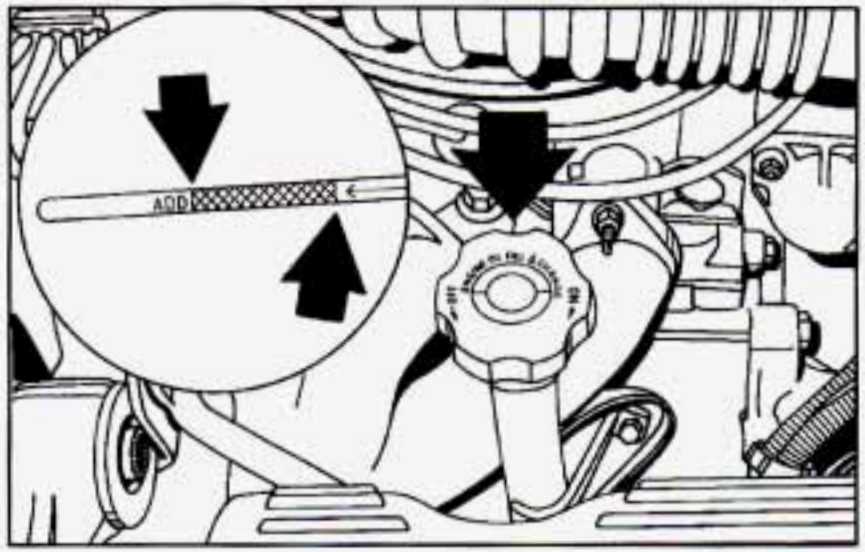
Pull out the dipstick and clean it with a paper towel or cloth, then push it back in all the way. Remove it again, keeping the tip down, and check the level.

**3100 V6 Engine**




The 3100 V6 engine oil dipstick is located near the front and center of the engine compartment.

**2.2L L4 Engine**




The 2.2L L4 engine oil dipstick is located in the fill cap near the front and center of the engine compartment.

## When to Add Oil

If the oil is at or below the ADD line, then you'll need to add some oil. But you must use the right kind. This part explains what kind of oil to use. For crankcase capacity, see "Capacities and Specifications" in the Index.

**NOTICE:**

**Don't add too much oil. If your engine has so much oil that the oil level gets above the cross-hatched area that shows the proper operating range, your engine could be damaged.**

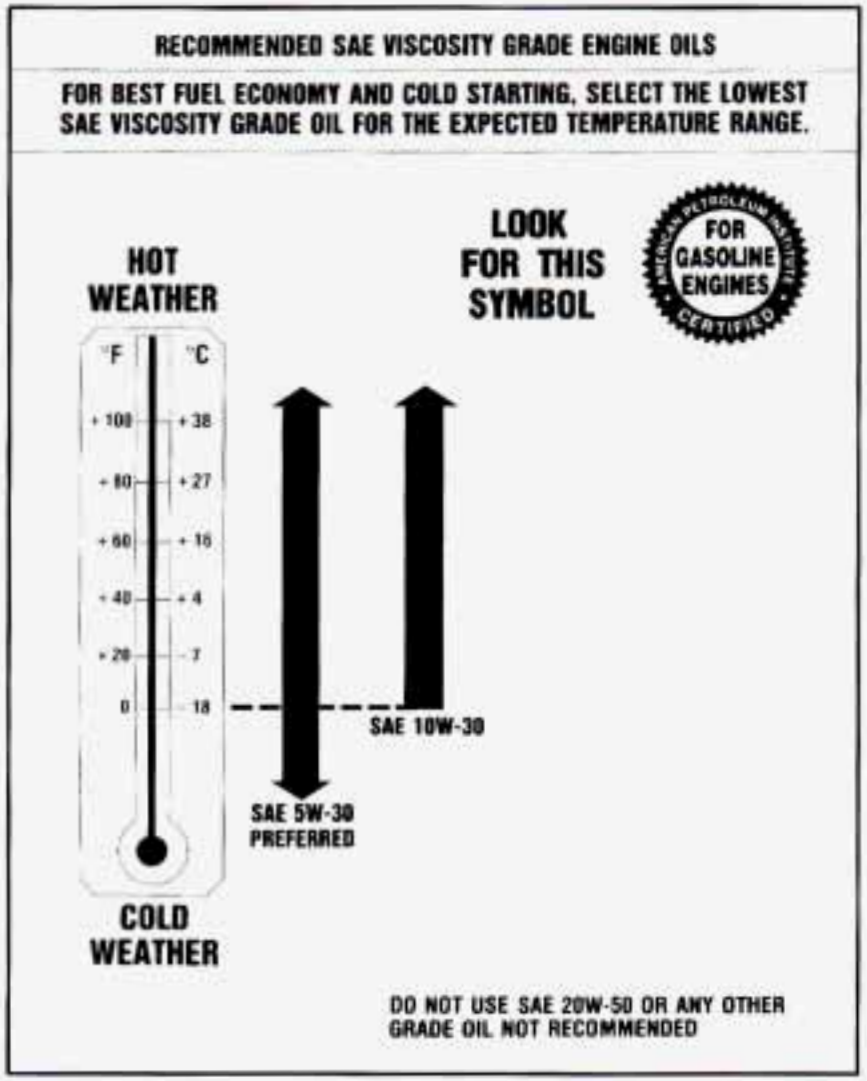
Just fill it enough to put the level somewhere in the proper operating range. Push the dipstick all the way back in when you're through.

## What Kind of Oil to Use

Oils of the proper quality for your vehicle can be identified by looking for the "Starburst" symbol. The "Starburst" symbol indicates that the oil has been certified by the American Petroleum Institute (API), and is preferred for use in your gasoline engine.

If you change your own oil, be sure you use oil that has the "Starburst" symbol on the front of the oil container. If you have your oil changed for you, be sure the oil put into your engine is American Petroleum Institute certified for gasoline engines.

You should also use the proper viscosity oil for your vehicle, as shown in the following chart:




As shown in the chart, SAE 5W-30 is best for your vehicle. However, you can use SAE 10W-30 if it's going to be 0°F (-18°C) or above. These numbers on an oil container show its viscosity, or thickness. Do not use other viscosity oils, such as SAE 20W-50.

**NOTICE:**

**Use only engine oil with the American Petroleum Institute Certified For Gasoline Engines "Starburst" symbol. Failure to use the proper oil can result in engine damage not covered by your warranty.**

GM Goodwrench® oil (in Canada, GM Engine Oil) meets all the requirements for your vehicle.

## Engine Oil Additives

Don't add anything to your oil. Your Buick dealer is ready to advise if you think something should be added.

### When to Change Engine Oil

See if any one of these is true for you:

- Most trips are less than 5 to 10 miles (8 to 16 km). This is particularly important when outside temperatures are below freezing.
- Most trips include extensive idling (such as frequent driving in stop and go traffic).
- Most trips are through dusty areas.
- You frequently tow a trailer or use a carrier on top of your car.

If any one of these is true for your vehicle, then you need to change your oil and filter every 3,000 miles (5 000 km) or 3 months -- whichever comes first.

If none of them is true, change the oil and filter every 7,500 miles (12 500 km) or 12 months -- whichever comes first.

### Engine Coolant Heater

An engine coolant heater can be a big help if you have to park outside in very cold weather, 0°F (-18°C) or colder. If your vehicle has this option, see "Engine Coolant Heater" in the Index.

### What to Do with Used Oil

Did you know that used engine oil contains certain elements that may be unhealthy for your skin and could even cause cancer? Don't let used oil stay on your skin for very long. Clean your skin and nails with soap and water, or a good hand cleaner. Wash or properly throw away clothing or rags containing used engine oil. (See the manufacturer's warnings about the use and disposal of oil products.)

Used oil can be a real threat to the environment. If you change your own oil, be sure to drain all free-flowing oil from the filter before disposal. Don't ever dispose of oil by putting it in the trash, pouring it on the ground, into sewers, or into streams or bodies of water. Instead, recycle it by taking it to a place that collects used oil. If you have a problem properly disposing of your used oil, ask your dealer, a service station or a local recycling center for help.

## Air Cleaner

Your air cleaner is on the driver's side of the engine compartment.

Refer to the Maintenance Schedule to determine when to replace the air filter.

See "Scheduled Maintenance Services" in the Index.

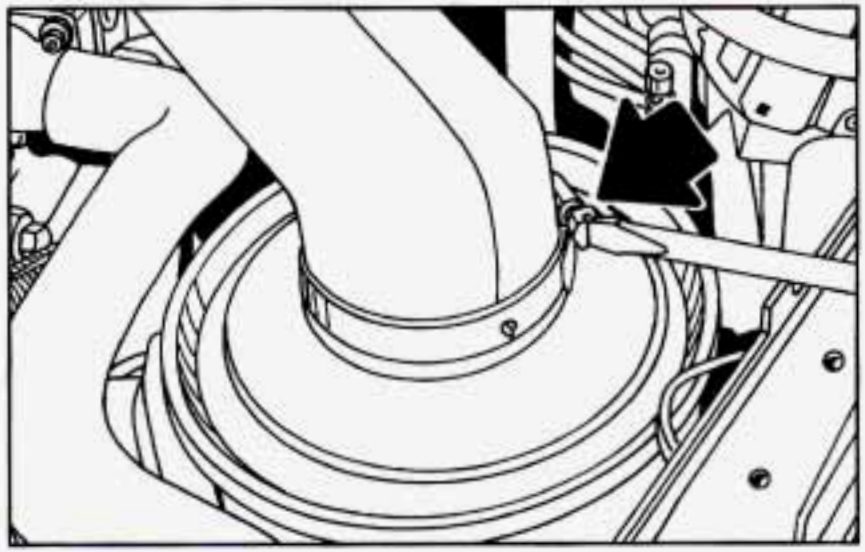
## ⚠ CAUTION:

**Operating the engine with the air cleaner off can cause you or others to be burned. The air cleaner not only cleans the air, it stops flame if the engine backfires. If it isn't there, and the engine backfires, you could be burned. Don't drive with it off, and be careful working on the engine with the air cleaner off.**

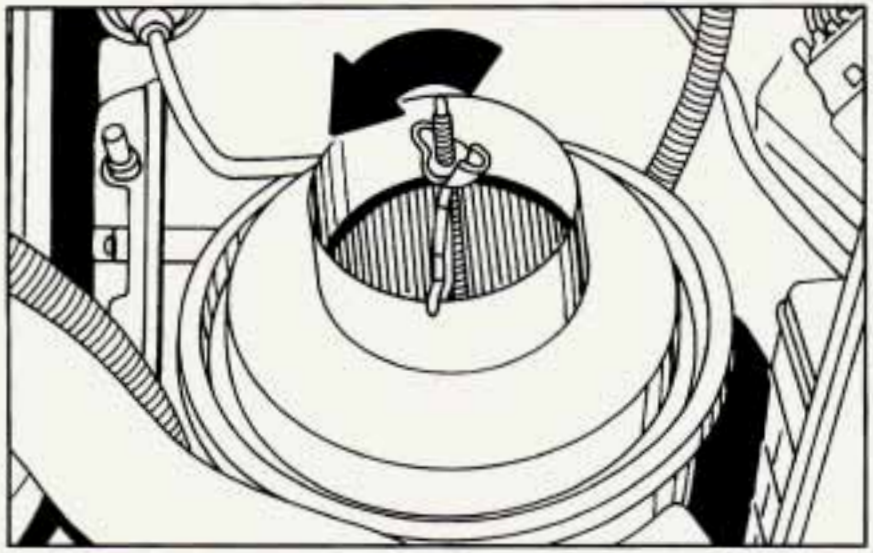
## NOTICE:

**If the air cleaner is off, a backfire can cause a damaging engine fire. And, dirt can easily get into your engine, which will damage it. Always have the air cleaner in place when you're driving.**

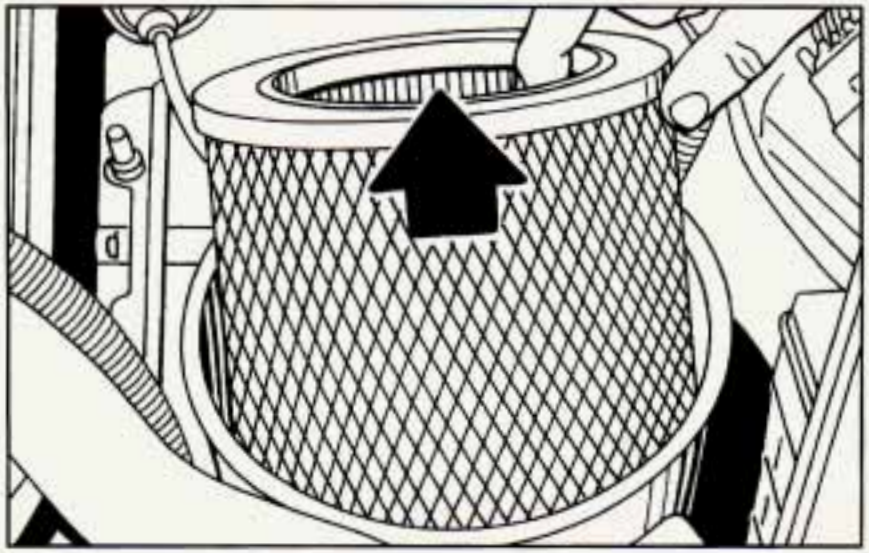
**To check or replace the air filter:**



1. Use a screwdriver to loosen the hose clamp, then lift the rubber duct.



2. Remove the wing nut and pull off the cover.



3. Remove and replace the filter. Replace the cover, wing nut and rubber duct. Tighten the hose clamp.

# Automatic Transaxle Fluid

## When to Check and Change

A good time to check your automatic transaxle fluid level is when the engine oil is changed. Refer to the Maintenance Schedule to determine when to change your fluid. See "Scheduled Maintenance Services" in the Index.

## How to Check

Because this operation can be a little difficult, you may choose to have this done at your Buick dealer Service Department.

If you do it yourself, be sure to follow all the instructions here, or you could get a false reading on the dipstick.

**NOTICE:**

**Too much or too little fluid can damage your transaxle. Too much can mean that some of the fluid could come out and fall on hot engine parts or exhaust system parts, starting a fire. Be sure to get an accurate reading if you check your transaxle fluid.**

Wait at least 30 minutes before checking the transaxle fluid level if you have been driving:

- When outside temperatures are above 90°F (32°C).
- At high speed for quite a while.
- In heavy traffic -- especially in hot weather.
- While pulling a trailer.

To get the right reading, the fluid should be at normal operating temperature, which is 180°F to 200°F (82°C to 93°C).

Get the vehicle warmed up by driving about 15 miles (24 km) when outside temperatures are above 50°F (10°C). If it's colder than 50°F (10°C), you may have to drive longer.

**To check the fluid level**

- Park your vehicle on a level place. Keep the engine running.
- With the parking brake applied, place the shift lever in PARK (P).
- With your foot on the brake pedal, move the shift lever through each gear range, pausing for about three seconds in each range. Then, position the shift lever in PARK (P).
- Let the engine run at idle for three to five minutes.

Then, without shutting off the engine, follow these steps:

**3100 V6 Engine**

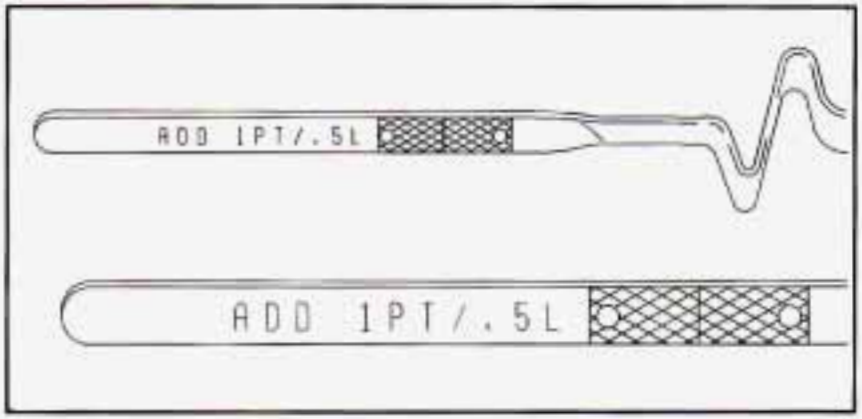
The red handle dipstick on the four speed (4T60-E) transaxle engine looks like this.

**2.2 L L4 Engine**

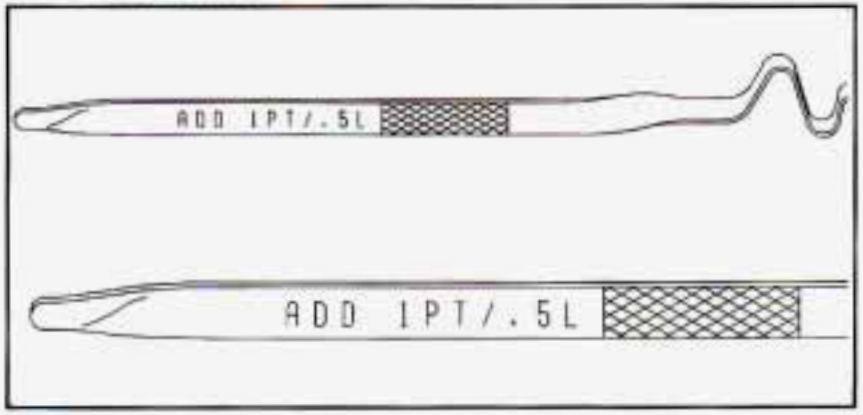
The red handle dipstick on the three speed (3T40) transaxle looks like this.

1. Pull out the dipstick and wipe it with a clean rag or paper towel.
2. Push it back in all the way, wait three seconds and then pull it back out again.

**4T60-E Transaxle**




**3T40 Transaxle**




3. Check both sides of the dipstick, and read the lower level. The fluid level must be in the cross-hatched area.
4. If the fluid level is in the acceptable range, push the dipstick back in all the way.

## How to Add Fluid

Refer to the Maintenance Schedule to determine what kind of transaxle fluid to use. See "Recommended Fluids and Lubricants" in the Index.

If the fluid level is low, add only enough of the proper fluid to bring the level into the cross-hatched area on the dipstick.

1. Pull out the dipstick.
2. Using a long-neck funnel, add enough fluid at the dipstick hole to bring it to the proper level. It doesn't take much fluid, generally less than a pint (0.5L). *Don't overfill.* We recommend you use only fluid labeled DEXRON®-III, because fluid with that label is made especially for your automatic transaxle. Damage caused by fluid other than DEXRON®-III is not covered by your new vehicle warranty.

- After adding fluid, recheck the fluid level as described under "How to Check."
- When the correct fluid level is obtained, push the dipstick back in all the way.

## Superlift Shock Absorbers (Option)

If you have this option, you can level your vehicle for different loads. As you need to, add air to the rear shock absorbers through the air vale, located next to the fuel filler cap behind the fuel filler door. Always keep a minimum pressure of 10-15 psi (70-105 kPa).

After you load your vehicle, you can add pressure until the rear gets back to its normal riding height, but don't go above 90 psi (620 kPa).

### NOTICE:

**Do not use superlifts to raise your vehicle above its normal riding height. You can damage your superlifts or other parts if you drive that way for long periods.**

## Engine Coolant

The following explains your cooling system and how to add coolant when it is low. If you have a problem with engine overheating or if you need to add coolant to your radiator, see "Engine Overheating" in the Index.

The proper coolant for your Buick will:

- Give freezing protection down to -34°F (-37°C).
- Give boiling protection up to 262°F (128°C).
- Protect against rust and corrosion.
- Help keep the proper engine temperature.
- Let the warning lights work as they should.

**What to Use**

Use a mixture of one-half *clean water* (preferably distilled) and one-half antifreeze that meets "GM Specification 1825-M," which won't damage aluminum parts. You can also use a recycled coolant conforming to GM Specification 1825-M with a complete coolant flush and refill. If you use this mixture, you don't need to add anything else.

**⚠ CAUTION:**

**Adding only plain water to your cooling system can be dangerous. Plain water, or some other liquid like alcohol, can boil before the proper coolant mix will. Your vehicle's coolant warning system is set for the proper coolant mix. With plain water or the wrong mix, your engine could get too hot but you wouldn't get the overheat warning. Your engine could catch fire and you or others could be burned. Use a 50/50 mix of clean water and a proper antifreeze.**

**NOTICE:**

**If you use an improper coolant mix, your engine could overheat and be badly damaged. The repair cost wouldn't be covered by your warranty. Too much water in the mix can freeze and crack the engine, radiator, heater core and other parts.**

## Adding Coolant

The coolant recovery tank is located on the passenger's side of the engine compartment.

### To Check Coolant

When your engine is cold, the coolant level should be at ADD or a little higher. When your engine is warm, the level should be up to FULL HOT or a little higher.

### To Add Coolant

If you need more coolant, add the proper mix *at the coolant recovery tank.*

If the coolant recovery tank is completely empty, add coolant to the radiator. (See "Engine Overheating" in the Index.)

> **⚠ CAUTION:**
>
> **Turning the radiator pressure cap when the engine and radiator are hot can allow steam and scalding liquids to blow out and burn you badly. With the coolant recovery tank, you will almost never have to add coolant at the radiator. Never turn the radiator pressure cap -- even a little -- when the engine and radiator are hot.**

Add coolant mix at the recovery tank, but be careful not to spill it.

**⚠ CAUTION:**

**You can be burned if you spill coolant on hot engine parts. Coolant contains ethylene glycol, and it will burn if the engine parts are hot enough. Don't spill coolant on a hot engine.**

## Radiator Pressure Cap

**NOTICE:**

**Your radiator cap is a 15 psi (105 kPa) pressure-type cap and must be tightly installed to prevent coolant loss and possible engine damage from overheating. Be sure the arrows on the cap line up with the overflow tube on the radiator filler neck.**

When you replace your radiator pressure cap, an AC® cap is recommended.

## Thermostat

Engine coolant temperature is controlled by a thermostat in the engine coolant system. The thermostat slows the flow of coolant through the radiator until the coolant reaches a preset temperature.

When you replace your thermostat, an AC® thermostat is recommended.

## Power Steering Fluid

The power steering fluid reservoir is located on the passenger's side of the engine compartment.

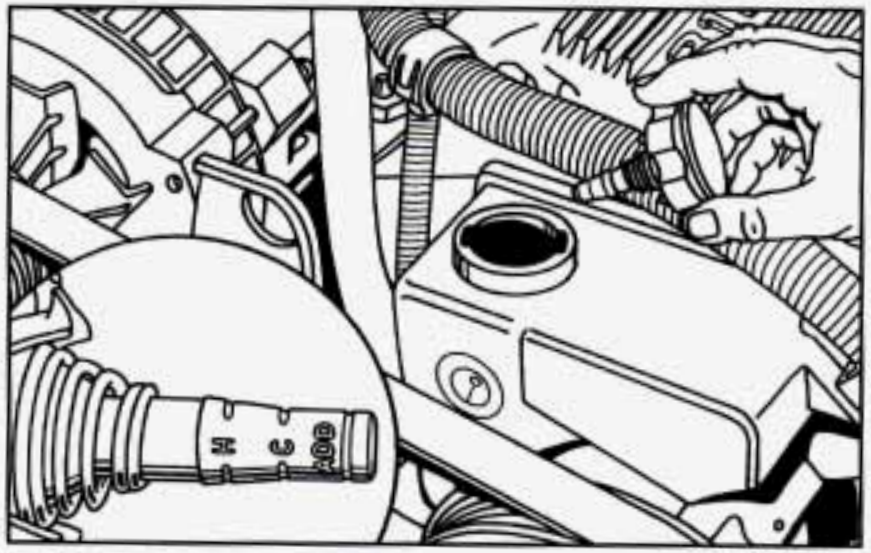
### How To Check Power Steering Fluid

When the engine compartment is cool, unscrew the cap and wipe the dipstick with a clean rag. Replace the cap and completely tighten it. Then remove the cap again and look at the fluid level on the dipstick.

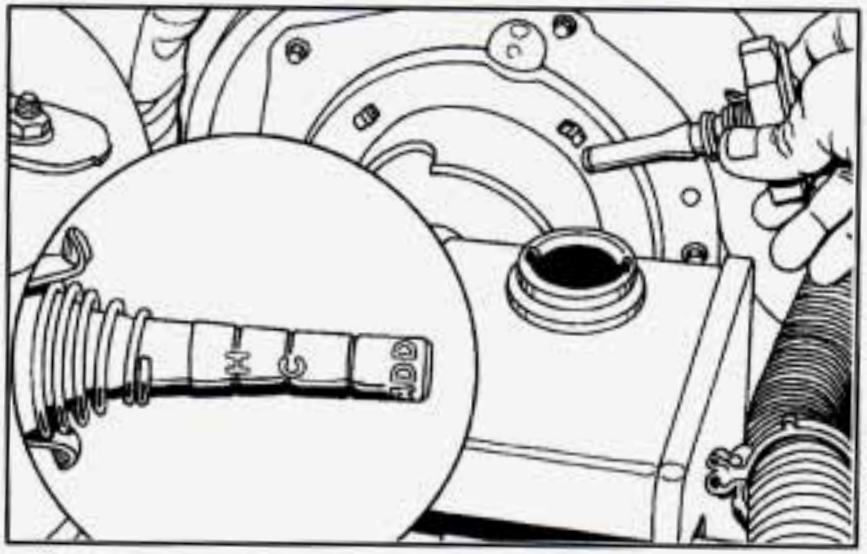
The level should be at the C mark. Add enough fluid to bring the level up to the mark.

A fluid loss in this system could indicate a problem. Have the system inspected and repaired.

3100 V6 Engine : Checking Power Steering Fluid




2.2L L4 Engine Checking Power Steering Fluid




## What to Add

Refer to the Maintenance Schedule to determine what kind of fluid to use. See "Recommended Fluids and Lubricants" in the Index.

**NOTICE:**

**When adding power steering fluid or making a complete fluid change, always use the proper fluid. Failure to use the proper fluid can cause leaks and damage hoses and seals.**

# Windshield Washer Fluid

## What to Use

When you need windshield washer fluid, be sure to read the manufacturer's instructions before use. If you will be operating your vehicle in an area where the temperature may fall below freezing, use a fluid that has sufficient protection against freezing.

## To Add

The windshield washer reservoir is located on the passenger's side of the engine compartment.

The wagon rear washer fluid comes from the windshield washer reservoir.

Open the cap labeled WASHER FLUID ONLY. Add washer fluid until the tank is full.

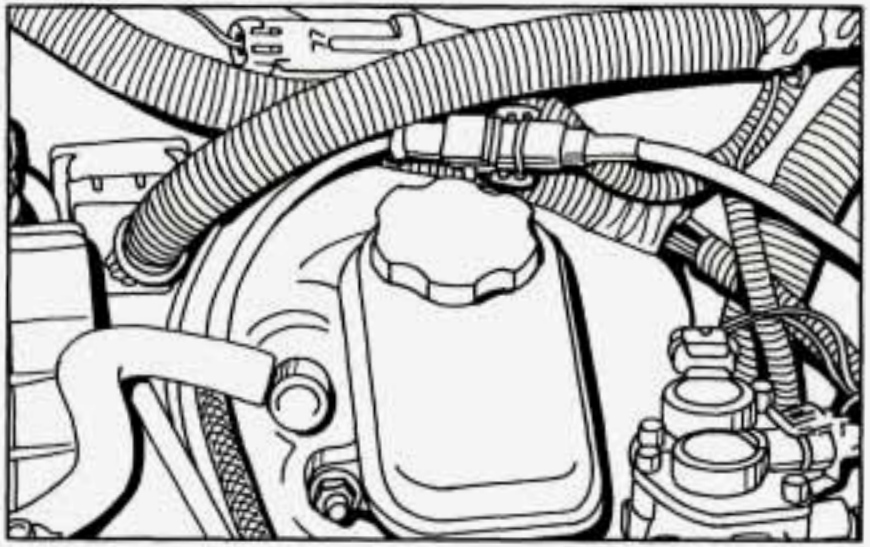
**NOTICE:**

- **When using concentrated washer fluid, follow the manufacturer's instructions for adding water.**
- **Don't mix water with ready-to-use washer fluid. Water can cause the solution to freeze and damage your washer fluid tank and other parts of the washer system. Also, water doesn't clean as well as washer fluid.**
- **Fill your washer fluid tank only 3/4 full when it's very cold. This allows for expansion, which could damage the tank if it is completely full.**
- **Don't use radiator antifreeze in your windshield washer. It can damage your washer system and paint.**

# Brakes

## Brake Master Cylinder

Your brake master cylinder is here. It is filled with DOT-3 brake fluid.



There are only two reasons why the brake fluid level in your master cylinder might go down. The first is that the brake fluid goes down to an acceptable level during normal brake lining wear. When new linings are put in, the fluid level goes back up. The other reason is that fluid is leaking out of the brake system. If it is, you should have your brake system fixed, since a leak means that sooner or later your brakes won't work well, or won't work at all. So, it isn't a good idea to "top off" your brake fluid. Adding brake fluid won't correct a leak. If you add fluid when your linings are worn, then you'll have too much fluid when you get new brake linings. You should add (or remove) brake fluid, as necessary, only when work is done on the brake hydraulic system.

**⚠ CAUTION:**

**If you have too much brake fluid, it can spill on the engine. The fluid will burn if the engine is hot enough. You or others could be burned, and your vehicle could be damaged. Add brake fluid only when work is done on the brake hydraulic system.**

When your brake fluid falls to a low level, your brake warning light will come on. See "Brake System Warning Light" in the Index.

### What to Add

When you do need brake fluid, use only DOT-3 brake fluid -- such as Delco Supreme 11® (GM Part No. 1052535). Use new brake fluid from a sealed container only, and always clean the brake fluid reservoir cap before removing it.

**NOTICE:**

- **Don't let someone put in the wrong kind of fluid. For example, just a few drops of mineral-based oil, such as engine oil, in your brake system can damage brake system parts so badly that they'll have to be replaced.**
- **Brake fluid can damage paint, so be careful not to spill brake fluid on your vehicle. If you do, wash it off immediately. See "Appearance Care" in the Index.**

## Brake Wear

Your Buick has front disc brakes and rear drum brakes.

Disc brake pads have built-in wear indicators that make a high-pitched warning sound when the brake pads are worn and new pads are needed. The sound may come and go or be heard all the time your vehicle is moving (except when you are pushing on the brake pedal firmly).

**⚠ CAUTION:**

**The brake wear warning sound means that sooner or later your brakes won't work well. That could lead to an accident. When you hear the brake wear warning sound, have your vehicle serviced.**

**NOTICE:**

**Continuing to drive with worn-out brake pads could result in costly brake repair.**

Some driving conditions or climates may cause a brake squeal when the brakes are first applied or lightly applied. This does not mean something is wrong with your brakes.

Your rear drum brakes don't have wear indicators, but if you ever hear a rear brake rubbing noise, have the rear brake linings inspected. Also, the rear brake drums should be removed and inspected each time the tires are removed for rotation or changing. When you have the front brakes replaced, have the rear brakes inspected, too.

Brake linings should always be replaced as complete axle sets.

### Brake Pedal Travel

See your dealer if the brake pedal does not return to normal height, or if there is a rapid increase in pedal travel. This could be a sign of brake trouble.

### Brake Adjustment

Every time you apply the brakes moderately, with or without the vehicle moving, your brakes adjust for wear.

### Replacing Brake System Parts

The braking system on a modern vehicle is complex. Its many parts have to be of top quality and work well together if the vehicle is to have really good braking. Vehicles we design and test have top-quality GM brake parts in them, as your Buick does when it is new. When you replace parts of your braking system -- for example, when your brake linings wear down and you have to have new ones put in -- be sure you get new genuine GM replacement parts. If you don't, your brakes may no longer work properly. For example, if someone puts in brake linings that are wrong for your vehicle, the balance between your front and rear brakes can change -- for the worse. The braking performance you've come to expect can change in many other ways if someone puts in the wrong replacement brake parts.

## Battery

Every new Buick has a Delco Freedom® battery. You never have to add water to one of these. When it's time for a new battery, we recommend a Delco Freedom® battery. Get one that has the replacement number shown on the original battery's label.

## Vehicle Storage

If you're not going to drive your vehicle for 25 days or more, take off the black, negative (-) cable from the battery. This will help keep your battery from running down.

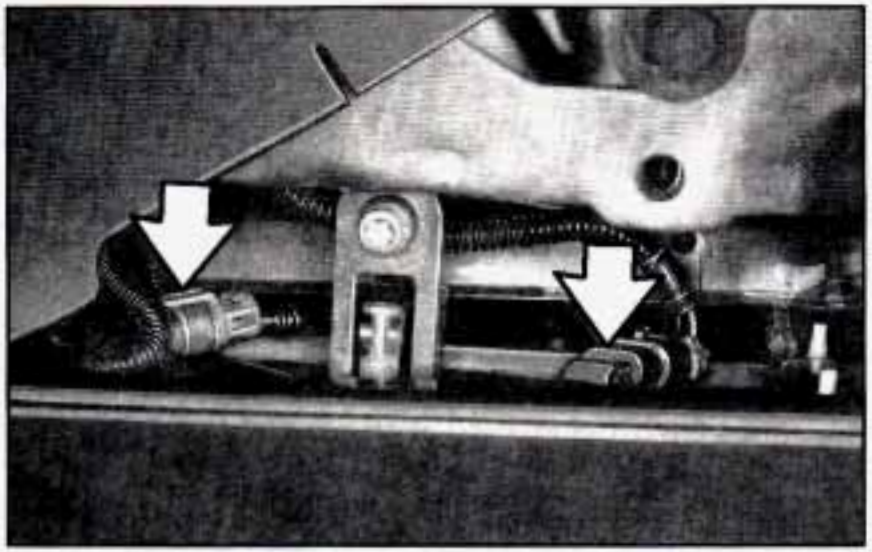
> **⚠ CAUTION:**
>
> **Batteries have acid that can burn you and gas that can explode. You can be badly hurt if you aren't careful. See "Jump Starting" in the Index for tips on working around a battery without getting hurt.**

Contact your dealer to learn how to prepare your vehicle for longer storage periods.

## Halogen Bulbs

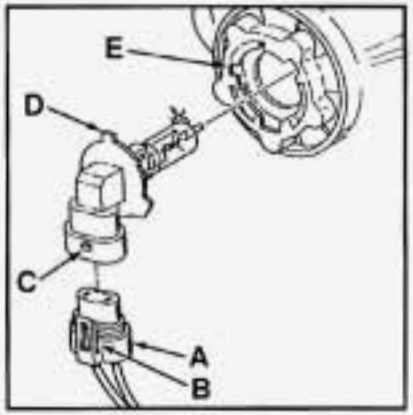
> **⚠ CAUTION:**
>
> **Halogen bulbs have pressurized gas inside and can burst if you drop or scratch the bulb. You or others could be injured. Take special care when handling and disposing of halogen bulbs.**

## Headlamp Bulb Replacement



For the type of bulb, see the Index under "Replacement Bulbs."

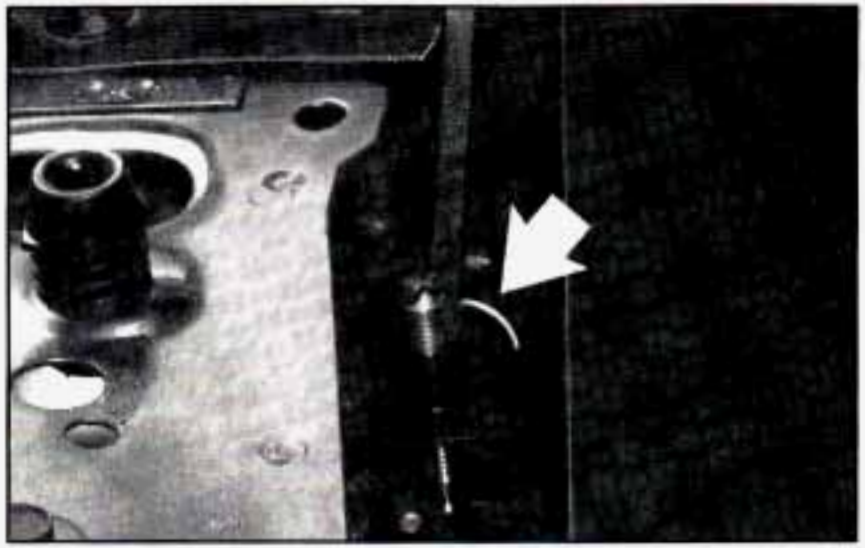
1. Turn the bulb assembly counterclockwise 1/6 turn, pressing in firmly, until the flanges align with the slots in the retainer ring.
2. Pull out the bulb assembly.
3. Disconnect the bulb base from the wiring harness by lifting the plastic locking tab.



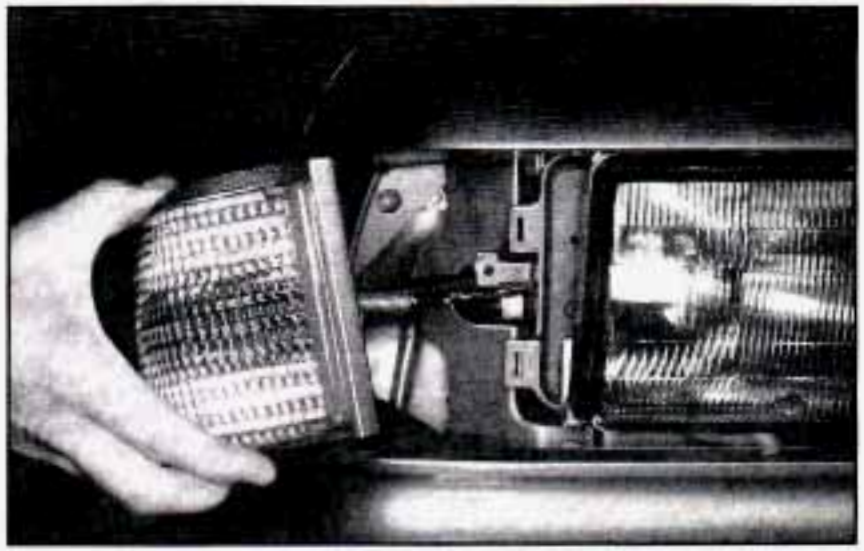

To replace the bulb assembly:

1. Snap a new bulb into the wiring harness (A). Make sure the locking tab (B) is over the lock (C).
2. Install the bulb assembly by putting the small tab (D) in the small notch in the retainer ring (E).
3. Turn the bulb assembly 1/6 turn clockwise to lock it in place.

## Front Turn and Parking Bulb and/or Side Marker Bulb Replacement



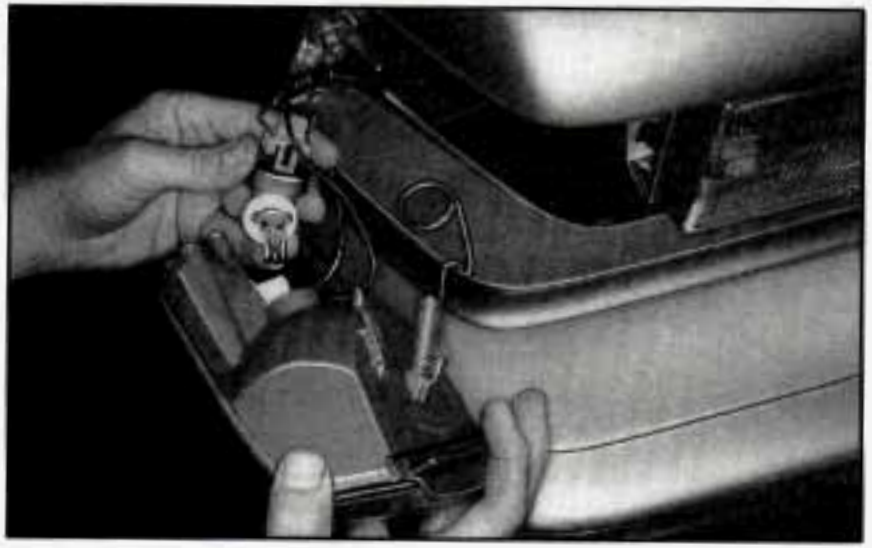
1. Raise the hood.
2. Insert a screwdriver into the loop of the spring, which can be seen just behind the bulb assembly.
3. Pull the spring to the rear and slightly toward the outside of the car until the detent releases from the notch in the headlight mounting frame.



4. The bulb assembly is now loose. Pull it forward until the bulb assembly can be reached.

To replace the turn/park bulb:

1. Rotate the bulb socket housing 1/4 turn counterclockwise.
2. Push in and turn the bulb counterclockwise to remove it.
3. Put in the new bulb and turn it clockwise.
4. Snap the wire connector onto the bulb assembly.



To replace the side marker bulb:

1. Remove the socket by turning it counterclockwise and pulling it straight out.
2. Remove the bulb by pulling it straight out of the socket.
3. Insert the new bulb by pressing it straight into the socket.
4. Insert the socket by pressing it straight into the bulb hole and turning it clockwise.

To reinstall the lamp:

1. Guide the latch spring through the opening in the metal inner panel.

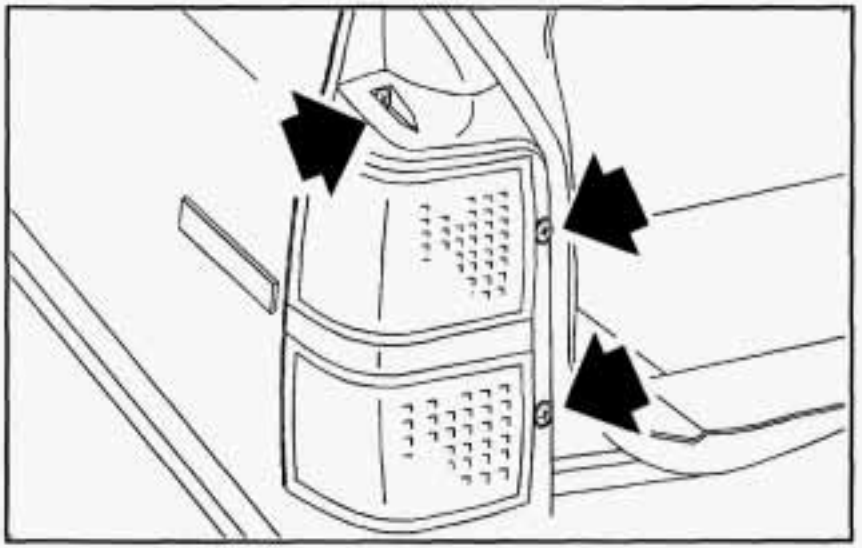
2. Engage the two blades on the lamp into the slots on the headlamp while engaging the two pins at the rear of the lamp openings into the sockets on the rear of the lamp. The lamp is now in place.
3. Insert a screwdriver into the loop on the latch spring. Pull the spring to the rear and slightly center of the vehicle until the detent engages into the notch.

## Taillight Bulb Replacement (Sedan)

For the type of bulb, see the Index under "Replacement Bulbs."

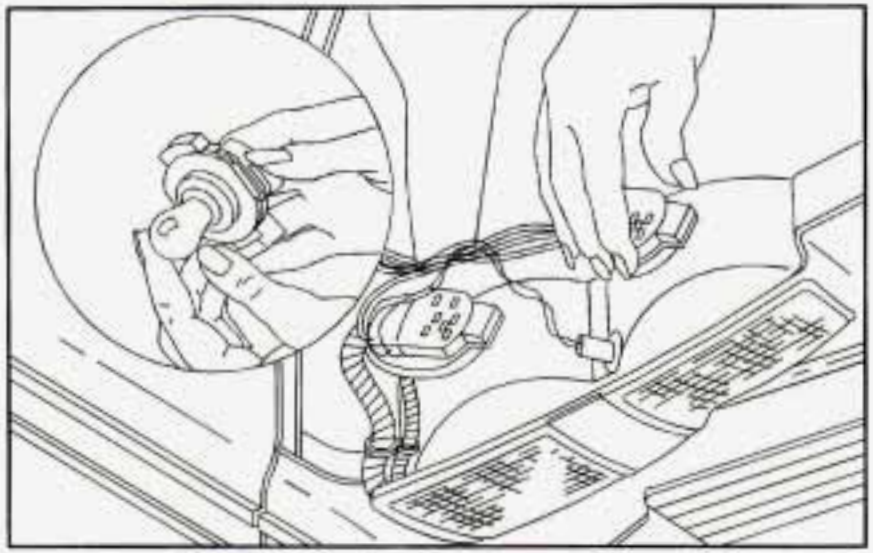
Replacing bulbs in the taillight housing is very difficult, and we recommend that you see your dealer when you need a bulb replaced.

## Taillight Bulb Replacement (Wagon)



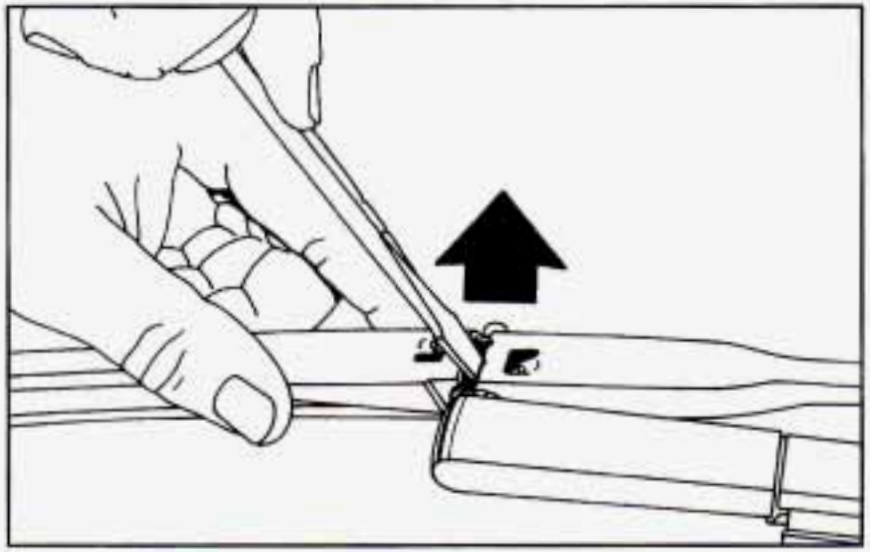
For the type of bulb, see the Index under "Replacement Bulbs."

1. Open the liftgate.
2. Remove the three Phillips head screws.
3. Pull the taillight housing away from the body of the vehicle.



4. Press the bulb housing release lever and turn the housing 1/6 turn counterclockwise to remove it.
5. To remove the bulb, push in and rotate it counterclockwise.
6. Reverse all steps to reassemble the taillight.

## Windshield Wiper Blade Replacement



Replacement blades come in different types and are removed in different ways. Here's how to remove the type with a spring release:

1. Pull the windshield wiper arm away from the windshield.
2. Press down on the spring with a screwdriver and pull the blade assembly off the wiper arm.
3. Push the new wiper blade securely onto the wiper arm.

## ⚠ CAUTION:

**Poorly maintained and improperly used tires are dangerous.**

- **Overloading your tires can cause overheating as a result of too much friction. You could have an air-out and a serious accident. See "Loading Your Vehicle" in the Index.**
- **Underinflated tires pose the same danger as overloaded tires. The resulting accident could cause serious injury. Check all tires frequently to maintain the recommended pressure. Tire pressure should be checked when your tires are cold.**
- **Overinflated tires are more likely to be cut, punctured, or broken by a sudden impact, such as when you hit a pothole. Keep tires at the recommended pressure.**
- **Worn, old tires can cause accidents. If your tread is badly worn, or if your tires have been damaged, replace them.**

## Inflation - Tire Pressure

The Tire-Loading Information label which is on the rear edge of the driver's door shows the correct inflation pressures for your tires, when they're cold. "Cold" means your vehicle has been sitting for at least three hours or driven no more than a mile.

## NOTICE:

**Don't let anyone tell you that underinflation or overinflation is all right. It's not. If your tires don't have enough air (underinflation) you can get:**

- **Too much flexing**
- **Too much heat**
- **Tire overloading**
- **Bad wear**
- **Bad handling**
- **Bad fuel economy.**

**NOTICE: (Continued)**

**NOTICE: (Continued)**

**If your tires have too much air (overinflation), you can get:**

- **Unusual wear**
- **Bad handling**
- **Rough ride**
- **Needless damage from road hazards.**

### When to Check

Check your tires once a month or more.

Don't forget your compact spare tire. It should be at 60 psi (420 kPa).

### How to Check

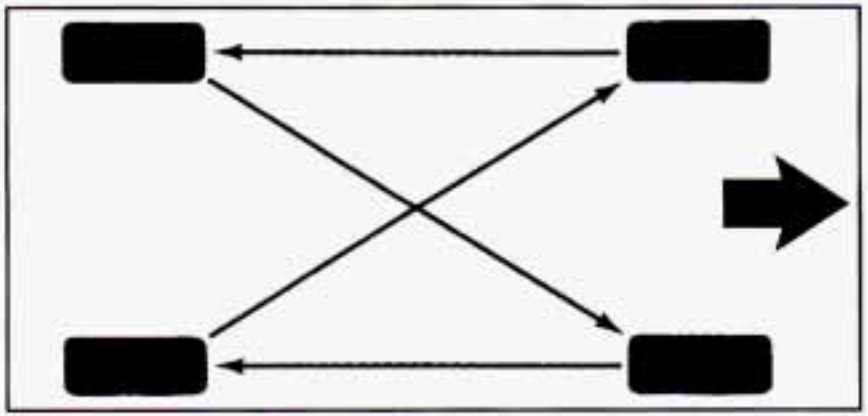
Use a good quality pocket-type gage to check tire pressure. Simply looking at the tires will not tell you the pressure, especially if you have radial tires -- which may look properly inflated even if they're underinflated.

If your tires have valve caps, be sure to put them back on. They help prevent leaks by keeping out dirt and moisture.

## Tire Inspection and Rotation

Tires should be inspected every 6,000 to 8,000 miles (10 000 to 13 000 km) for any signs of unusual wear. If unusual wear is present, rotate your tires as soon as possible and check wheel alignment. Also check for damaged tires or wheels. See "When it's Time for New Tires" and "Wheel Replacement" later in this section for more information.

The purpose of regular rotation is to achieve more uniform wear for all tires on the vehicle. The first rotation is the most important. See "Scheduled Maintenance Services" in the Index for scheduled rotation intervals.



When rotating your tires, always use the correct rotation pattern shown here.

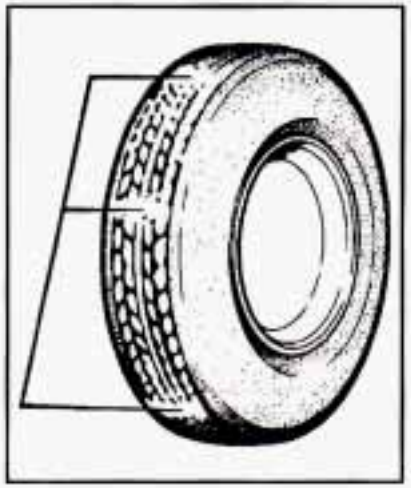
Don't include the compact spare tire in your tire rotation.

After the tires have been rotated, adjust the front and rear inflation pressures as shown on the Tire-Loading Information label. Make certain that all wheel nuts are properly tightened. See "Wheel Nut Torque" in the Index.

**⚠ CAUTION:**

**Rust or dirt on a wheel, or on the parts to which it is fastened, can make wheel nuts become loose after a time. The wheel could come off and cause an accident. When you change a wheel, remove any rust or dirt from places where the wheel attaches to the vehicle. In an emergency, you can use a cloth or a paper towel to do this; but be sure to use a scraper or wire brush later, if you need to, to get all the rust or dirt off. (See "Changing a Flat Tire" in the Index.)**

### When it's Time for New Tires



One way to tell when it's time for new tires is to check the treadwear indicators, which will appear when your tires have only 1/16 inch (1.6 mm) or less of tread remaining.

You need a new tire if:

- You can see the indicators at three or more places around the tire.
- You can see cord or fabric showing through the tire's rubber.
- The tread or sidewall is cracked, cut or snagged deep enough to show cord or fabric.
- The tire has a bump, bulge or split.
- The tire has a puncture, cut, or other damage that can't be repaired well because of the size or location of the damage.

## Buying New Tires

To find out what kind and size of tires you need, look at the Tire-Loading Information label.

The tires installed on your vehicle when it was new a Tire Performance Criteria Specification (TPC Spec) number on each tire's sidewall. When you get new tires, get ones with that same TPC Spec number. That way, your vehicle will continue to have tires that are designed to give proper endurance, handling, speed rating, traction, ride and other things during normal service on your vehicle. If your tires have an all-season tread design, the TPC number will be followed by an "MS" (for mud and snow).

If you ever replace your tires with those not having a TPC Spec number, make sure they are the same size, load range, speed rating and construction type (bias, bias-belted or radial) as your original tires.

**⚠ CAUTION:**

**Mixing tires could cause you to lose control while driving. If you mix tires of different sizes or types (radial and bias-belted tires), the vehicle may not handle properly, and you could have a crash. Be sure to use the same size and type tires on all four wheels.**

**It's all right to drive with your compact spare, though. It was developed for use on your vehicle.**

## Uniform Tire Quality Grading

The following information relates to the system developed by the United States National Highway Traffic Safety Administration which grades tires by treadwear, traction and temperature performance. (This applies only to vehicles sold in the United States.)

**Treadwear**

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and a half (1 1/2) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

**Traction - A, B, C**

The traction grades, from highest to lowest are: A, B, and C. They represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

Warning: The traction grade assigned to this tire is based on braking (straight-ahead) traction tests and does not include cornering (turning) traction.

**Temperature - A, B, C**

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

Warning: The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

These grades are molded on the sidewalls of passenger car tires.

While the tires available as standard or optional equipment on General Motors vehicles may vary with respect to these grades, all such tires meet General Motors performance standards and have been approved for use on General Motors vehicles. All passenger type (P Metric) tires must conform to Federal safety requirements in addition to these grades.

## Wheel Alignment and Tire Balance

The wheels on your vehicle were aligned and balanced carefully at the factory to give you the longest tire life and best overall performance.

In most cases, you will not need to have your wheels aligned again. However, if you notice unusual tire wear or your vehicle pulling one way or the other, the alignment may need to be reset. If you notice your vehicle vibrating when driving on a smooth road, your wheels may need to be rebalanced.

## Wheel Replacement

Replace any wheel that is bent, cracked, or badly rusted or corroded. If wheel nuts keep coming loose, the wheel, wheel bolts, and wheel nuts should be replaced. If the wheel leaks air, replace it (except some aluminum wheels, which can sometimes be repaired). See your Buick dealer if any of these conditions exist.

Your dealer will know the kind of wheel you need.

Each new wheel should have the same load carrying capacity, diameter, width, offset, and be mounted the same way as the one it replaces.

If you need to replace any of your wheels, wheel bolts, or wheel nuts, replace them only with new GM original equipment parts. This way, you will be sure to have the right wheel, wheel bolts, and wheel nuts for your Buick model.

**⚠ CAUTION:**

**Using the wrong replacement wheels, wheel bolts, or wheel nuts on your vehicle can be dangerous. It could affect the braking and handling of your vehicle, make your tires lose air and make you lose control. You could have a collision in which you or others could be injured. Always use the correct wheel, wheel bolts, and wheel nuts for replacement.**

**NOTICE:**

**The wrong wheel can also cause problems with bearing life, brake cooling, speedometer/odometer calibration, headlamp aim, bumper height, vehicle ground clearance, and tire or tire chain clearance to the body and chassis.**

### Used Replacement Wheels

**⚠ CAUTION:**

**Putting a used wheel on your vehicle is dangerous. You can't know how it's been used or how many miles it's been driven. It could fail suddenly and cause an accident. If you have to replace a wheel use a new GM original equipment wheel.**

### Tire Chains

**NOTICE:**

**Use tire chains only where legal and only when you must. Use only SAE Class "S" type chains that are the proper size for your tires. Install them on the front tires and tighten them as tightly as possible with the ends securely fastened. Drive slowly and follow the chain manufacturer's instructions. If you can hear the chains contacting your vehicle, stop and retighten them. If the contact continues, slow down until it stops. Driving too fast or spinning the wheels with chains on will damage your vehicle.**

## Appearance Care

Remember, cleaning products can be hazardous. Some are toxic. Others can burst into flame if you strike a match or get them on a hot part of the vehicle. Some are dangerous if you breathe their fumes in a closed space. When you use anything from a container to clean your Buick, be sure to follow the manufacturer's warnings and instructions. And always open your doors or windows when you're cleaning the inside.

*Never* use these to clean your vehicle:

- Gasoline
- Benzene
- Naphtha
- Carbon Tetrachloride
- Acetone
- Paint Thinner
- Turpentine
- Lacquer Thinner
- Nail Polish Remover

They can all be hazardous -- some more than others -- and they can all damage your vehicle, too.

Don't use any of these unless this manual says you can. In many uses, these will damage your vehicle:

- Alcohol
- Laundry Soap
- Bleach
- Reducing Agents

## Cleaning the Inside of Your Buick

Use a vacuum cleaner often to get rid of dust and loose dirt. Wipe vinyl or leather with a clean, damp cloth.

Your Buick dealer has two GM cleaners, a solvent-type spot lifter and a foam-type powdered cleaner. They will clean normal spots and stains very well. Do not use them on vinyl or leather.

Here are some cleaning tips:

- Always read the instructions on the cleaner label.
- Clean up stains as soon as you can -- before they set.
- Use a clean cloth or sponge, and change to a clean area often. A soft brush may be used if stains are stubborn.
- Use solvent-type cleaners in a well-ventilated area only. If you use them, don't saturate the stained area.
- If a ring forms after spot cleaning, clean the entire area immediately or it will set.

## Using Foam-Type Cleaner on Fabric

- Vacuum and brush the area to remove any loose dirt.
- Always clean a whole trim panel or section. Mask surrounding trim along stitch or welt lines.
- Mix Multi-Purpose Powdered Cleaner following the directions on the container label.
- Use suds only and apply with a clean sponge.
- Don't saturate the material.
- Don't rub it roughly.
- As soon as you've cleaned the section, use a sponge to remove the suds.
- Rinse the section with a clean, wet sponge.
- Wipe off what's left with a slightly damp paper towel or cloth.
- Then dry it immediately with a blow dryer or a heat lamp.

**NOTICE:**

**Be careful. A blow dryer may scorch the fabric.**

- Wipe with a clean cloth.

## Using Solvent-Type Cleaner on Fabric

First, see if you have to use solvent-type cleaner at all. Some spots and stains will clean off better with just water and mild soap.

If you need to use a solvent:

- Gently scrape excess soil from the trim material with a clean, dull knife or scraper. Use very little cleaner, light pressure and clean cloths (preferably cheesecloth). Cleaning should start at the outside of the stain, "feathering" toward the center. Keep changing to a clean section of the cloth.
- When you clean a stain from fabric, immediately dry the area with a blow dryer to help prevent a cleaning ring. (See the previous NOTICE.)

## Special Cleaning Problems

### Greasy or Oily Stains

Stains caused by grease, oil, butter, margarine, shoe polish, coffee with cream, chewing gum, cosmetic creams, vegetable oils, wax crayon, tar and asphalt can be removed as follows:

- Carefully scrape off excess stain.
- Follow the solvent-type instructions described earlier.
- Shoe polish, wax crayon, tar and asphalt will stain if left on a vehicle seat fabric. They should be removed as soon as possible. Be careful, because the cleaner will dissolve them and may cause them to spread.

### Non-Greasy Stains

Stains caused by catsup, coffee (black), egg, fruit, fruit juice, milk, soft drinks, wine, vomit, urine and blood can be removed as follows:

- Carefully scrape off excess stain, then sponge the soiled area with cool water.
- If a stain remains, follow the foam-type instructions described earlier.
- If an odor lingers after cleaning vomit or urine, treat the area with a water/baking soda solution: 1 teaspoon (5 ml) of baking soda to 1 cup (250 ml) of lukewarm water.
- If needed, clean lightly with solvent-type cleaner.

### Combination Stains

Stains caused by candy, ice cream, mayonnaise, chili sauce and unknown stains can be removed as follows:

- Carefully scrape off excess stain, then clean with cool water and allow to dry.
- If a stain remains, clean it with solvent-type cleaner.

## Cleaning Vinyl

Use warm water and a clean cloth.

- Rub with a clean, damp cloth to remove dirt. You may have to do it more than once.
- Things like tar, asphalt and shoe polish will stain if you don't get them off quickly. Use a clean cloth and a solvent-type vinyl cleaner.

## Cleaning Leather

Use a soft cloth with lukewarm water and a mild soap or saddle soap.

- For stubborn stains, use a mild solution of 10% isopropyl alcohol (rubbing alcohol) and 90% water.
- *Never* use oils, varnishes, solvent-based or abrasive cleaners, furniture polish or shoe polish on leather.
- Soiled leather should be cleaned immediately. If dirt is allowed to work into finish, it can harm the leather.

## Cleaning the Top of the Instrument Panel

Use only mild soap and water to clean the top surfaces of the instrument panel. Sprays containing silicones or waxes may cause annoying reflections in the windshield and even make it difficult to see through the windshield under certain conditions.

# Care of Safety Belts

Keep belts clean and dry.

**⚠ CAUTION:**

**Do not bleach or dye safety belts. If you do, it may severely weaken them. In a crash they might not be able to provide adequate protection. Clean safety belts only with mild soap and lukewarm water.**

# Glass

Glass should be cleaned often. GM Glass Cleaner (GM Part No. 1050427) or a liquid household glass cleaner will remove normal tobacco smoke and dust films.

Don't use abrasive cleaners on glass, because they may cause scratches. Avoid placing decals on the inside rear window, since they may have to be scraped off later. If abrasive cleaners are used on the inside of the rear window, an electric defogger element may be damaged. Any temporary license should not be attached across the defogger grid.

## Cleaning the Outside of the Windshield, Backglass and Wiper Blades

If the windshield is not clear after using the windshield washer, or if the wiper blade chatters when running, wax or other material may be on the blade or windshield.

Clean the outside of the windshield with GM Windshield Cleaner, Bon-Ami Powder® (GM Part No. 1050011). The windshield is clean if beads do not form when you rinse it with water.

Clean the blade by wiping vigorously with a cloth soaked in full strength windshield washer solvent. Then rinse the blade with water.

Wiper blades should be checked on a regular basis and replaced when worn.

## Weatherstrips

Silicone grease on weatherstrips will make them last longer, seal better, and not stick or squeak. Apply silicone grease with a clean cloth at least every six months. During very cold, damp weather more frequent application may be required. (See "Recommended Fluids and Lubricants" in the Index.)

## Cleaning the Outside of Your Buick

The paint finish on your vehicle provides beauty, depth of color, gloss retention and durability.

### Washing Your Vehicle

The best way to preserve your vehicle's finish is to keep it clean by washing it often with lukewarm or cold water.

Don't wash your vehicle in the direct rays of the sun. Don't use strong soaps or chemical detergents. Use liquid hand, dish or car washing (mild detergent) soaps. Don't use cleaning agents that are petroleum based, or that contain acid or abrasives. All cleaning agents should be flushed promptly and not allowed to dry on the surface, or they could stain. Dry the finish with a soft, clean chamois or a 100% cotton towel to avoid surface scratches and water spotting.

High pressure car washes may cause water to enter your vehicle.

## Finish Care

Occasional waxing or mild polishing of your Buick by hand may be necessary to remove residue from the paint finish. You can get GM approved cleaning products from your dealer. (See "Appearance Care and Materials" in the Index.)

Your Buick has a "basecoat/clearcoat" paint finish. The clearcoat gives more depth and gloss to the colored basecoat. Always use waxes and polishes that are non-abrasive and made for a basecoat/clearcoat paint finish.

**NOTICE:**

**Machine compounding or aggressive polishing on a basecoat/clearcoat paint finish may dull the finish or leave swirl marks.**

Foreign materials such as calcium chloride and other salts, ice melting agents, road oil and tar, tree sap, bird droppings, chemicals from industrial chimneys, etc. can damage your vehicle's finish if they remain on painted surfaces. Wash the vehicle as soon as possible. If necessary, use non-abrasive cleaners that are marked safe for painted surfaces to remove foreign matter.

Exterior painted surfaces are subject to aging, weather and chemical fallout that can take their toll over a period of years. You can help to keep the paint finish looking new by keeping your Buick garaged or covered whenever possible.

## Aluminum Wheels (If So Equipped)

Your aluminum wheels have a protective coating similar to the painted surface of your car. Don't use strong soaps, chemicals, chrome polish, abrasive cleaners or abrasive cleaning brushes on them because you could damage this coating. After rinsing thoroughly, a wax may be applied.

**NOTICE:**

**If you have aluminum wheels, don't use an automatic car wash that has hard silicon carbide cleaning brushes. These brushes can take the protective coating off your aluminum wheels.**

## Tires

To clean your tires, use a stiff brush with a tire cleaner.

When applying a tire dressing always take care to wipe off any overspray or splash from painted surfaces. Petroleum-based products may damage the paint finish.

## Sheet Metal Damage

If your vehicle is damaged and requires sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to the parts repaired or replaced to restore corrosion protection.

## Finish Damage

Any stone chips, fractures or deep scratches in the finish should be repaired right away. Bare metal will corrode quickly and may develop into a major repair expense.

Minor chips and scratches can be repaired with touch-up materials available from your dealer or other service outlets. Larger areas of finish damage can be corrected in your dealer's body and paint shop.

## Underbody Maintenance

Chemicals used for ice and snow removal and dust control can collect on the underbody. If these are not removed, accelerated corrosion (rust) can occur on the underbody parts such as fuel lines, frame, floor pan, and exhaust system even though they have corrosion protection.

At least every spring, flush these materials from the underbody with plain water. Clean any areas where mud and other debris can collect. Dirt packed in closed areas of the frame should be loosened before being flushed. Your dealer or an underbody vehicle washing system can do this for you.

## Chemical Paint Spotting

Some weather and atmospheric conditions can create a chemical fallout. Airborne pollutants can fall upon and attack painted surfaces on your vehicle. This damage can take two forms: blotchy, ringlet-shaped discolorations, and small irregular dark spots etched into the paint surface.

Although no defect in the paint job causes this, Buick will repair, at no charge to the owner, the surfaces of new vehicles damaged by this fallout condition within 12 months or 12,000 miles (20 000 km) of purchase, whichever comes first.

# Appearance Care and Maintenance Materials

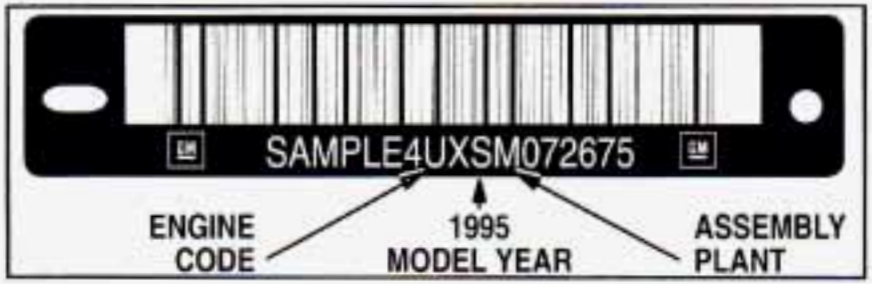
You can get these from your GM Parts Department.

| PART NUMBER | SIZE | DESCRIPTION | USAGE |
|---|---|---|---|
| 12345343 | 16 oz. (0.473L) | Goodwrench® Liquid Wax | Exterior polish |
| 1052277 | 12 oz. (0.354L) | Spray-A-Squeak Silicone Grease | Weatherstrips, Stops squeaks |
| 1052863 | 1 oz. (0.028kg) | | |
| 1050172 | 16 oz. (0.473L) | Tar and Road Oil Remover | Also removes old waxes, polishes |
| 1050173 | 16 oz. (0.473L) | Chrome Cleaner and Polish | Removes rust and corrosion |
| 1050174 | 16 oz. (0.473L) | White Sidewall Tire Cleaner | Cleans white and black tires |
| 1050214 | 32 oz. (0.946L) | Vinyl/Leather Cleaner | Spot and stain removal |
| 1050244 | 16 oz. (0.473L) | Fabric Cleaner | Spot and stain removal |
| 1050427 | 23 oz. (0.680L) | Glass Cleaner | Also spot cleans vinyls |
| 1050429 | 6 lbs. (2.72kg) | Multi-Purpose Powdered Cleaner | Cleans vinyl and cloth, also, tires and mats |
| 1052349 | 12 oz. (0.340kg) | Lubriplate (White Grease) | For hood, trunk, door hinges and latches |
| 1051055 | 16 oz. (0.473L) | Preservatone | Vinyl top dressing |
| 1051398* | 6 oz. (0.237L) | Spot Lifter | For cloth |
| 1051515 | 32 oz. (0.946L) | Washer Solvent | Windshield-washing system |
| 1052870 | 16 oz. (0.473L) | Wash-Wax (conc.) | Exterior wash |

*** Not recommended for pigskin suede leather.**

**See your General Motors Parts Departments for these products.**
**See your Maintenance Schedule for other products.**

## Vehicle Identification Number (VIN)




This is the legal identifier for your Buick. It appears on a plate in the front corner of the instrument panel, on the driver's side. You can see it if you look through the windshield from outside your vehicle. The VIN also appears on the Vehicle Certification and Service Parts labels and the certificates of title and registration.

### Engine Identification

The eighth character in your VIN is the engine code. This code will help you identify your engine, specifications, and replacement parts.

## Service Parts Identification Label

You'll find this label on your spare tire cover in the coupe or sedan. In the wagon, you'll find the label on the wheel well (remove the spare tire cover to expose the wheel well). It's very helpful if you ever need to order parts. On this label is:

- your VIN,
- the model designation,
- paint information, and
- a list of all production options and special equipment.

Be sure that this label is not removed from the vehicle.

## Add-On Electrical Equipment

**NOTICE:**

**Don't add anything electrical to your Buick unless you check with your dealer first. Some electrical equipment can damage your vehicle and the damage wouldn't be covered by your warranty. Some add-on electrical equipment can keep other components from working as they should.**

Your vehicle has an air bag system. Before attempting to add anything electrical to your Buick, see "Servicing Your Air Bag-Equipped Buick" in the Index.

# Fuses and Circuit Breakers

The wiring circuits in your vehicle are protected from short circuits by a combination of fuses, circuit breakers, and fusible thermal links in the wiring itself. This greatly reduces the chance of damage caused by electrical problems.

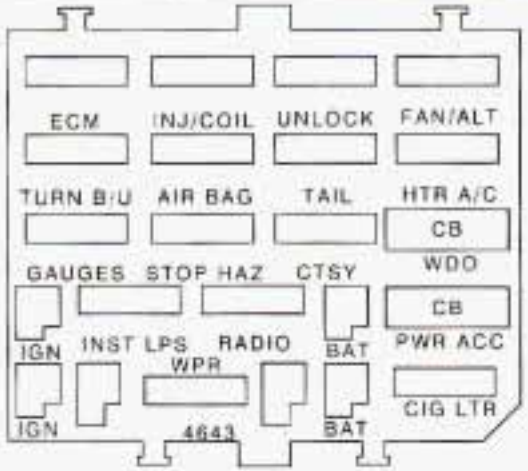
The fuse panel is located inside the glove box, on the left side.

To change a fuse, open the glove box. Pull down on the fuse panel latch and open the door. Pull the fuse straight out.

To identify and check fuses, refer to the Fuse Usage chart.

Look at the silver-colored band inside the fuse. If the band is broken or melted, replace the fuse. Be sure you replace a bad fuse with a new one of the identical size and rating.

## Fuse Usage Chart



FRONT VIEW OF FUSE BLOCK

| Fuse | Circuitry |
|---|---|
| ECM | Power Train Control Module |
| INJ/COIL | Fuel Injectors |
| UNLOCK | Auto Door Locks (Remove this fuse to disable the automatic door unlock.) |
| FAN/ALT | Electric Fan, Starter and Generator, Seq. Fuel Inj (V6), Cruise Control, Anti-Lock Brakes |
| TURN B/U | Back-Up Lamps |
| AIR BAG | Supplemental Inflatable Restraint (Air Bag) |
| TAIL | Tail, Park, Side Marker, License Plate, Stop/Turn Signal |
| HTR A/C | Heater/Air Conditioner Blower Controls |
| GAUGES | I/P Cluster, Warning Indicators, Torque Converter Clutch, Audible Warning System, Trunk Release, Brake Warning Indicator, Rear Defog Switch, Remote Keyless Entry, Headlamps, Air Bag (DERM) |
| STOP HAZ | Stop Lamps, Hazard Flashers |
| CTSY | Interior, Underhood, Courtesy, I/P, Trunk Lamps, Door Locks, Horn Relay, Passive Restraint System, Deck Lid Release, Power Antenna Remote Keyless Entry: Vanity Mirror |
| WDO* | Power Windows |
| INST LPS | Illumination for: I/P, Radio, Pod Lamps, Ashtray, Console Lamp, Heater-A/C Control, Defog Switch, Headlamp Switch, Power Antenna, Lighted Vanity Mirrors |
| RADIO | Radio |
| PWR ACC* | Seats, Door Locks, Rear Defog, Power Seat Recliner, Rear Window Wiper, Trunk Release, |
| WPR | Windshield Wiper/Washer |
| CIG LTR | Cigarette Lighter |

*Circuit Breaker

## Headlamp Wiring

The headlamp wiring is protected by a circuit breaker in the lamp switch. An electrical overload will cause the lamps to go on and off or, in some cases, to remain off. If this happens, have your headlamp system checked right away.

## Windshield Wipers

The windshield wiper motor is protected by a circuit breaker and a fuse. If the motor overheats due to heavy snow, etc., the wiper will stop until the motor cools. If the overload is caused by some electrical problem, have it fixed.

## Power Windows and Other Power Options

Circuit breakers in the fuse panel protect the power windows and other power accessories. When the current load is too heavy, the circuit breaker opens and closes, protecting the circuit until the problem is fixed.

## Engine A/C, EGR, Relays,SIR Crank and Safety Belt Fuses

These fuses are located behind the glove box. The fuse holders are taped together with gray tape.

## Other Fuses

The Safety Belt/Chime (ICAM) Module fuse and the Remote Lock Control fuse are located behind the fuse block, above the hush panel.

The Fuel Pump, ECM fuse is located under the hood.

## Replacement Bulbs

| OUTSIDE LIGHTS | BULB |
|---|---|
| Back-up Lights | 1156 |
| Front Parking/Turn Signal Lights | 2057 |
| License Plate Light | 194 |
| Center High-Mounted Stoplight | |
| Halogen Headlights | |
| Side Marker Lights (Front) | 194 |
| Side Marker Lights (Rear) | 24 |
| Stop/Tail/Turn Signal Lights | 2057 |
| Underhood Lamp | 561 |

| INSIDE LIGHTS | BULB |
|---|---|
| Ashtray | 194 |
| Courtesy Lights | 561 |
| Dome Light | |
| Glove Box Light | 194 |
| Heater & A/C Control | T-1.0 |
| High Beam Indicator | 194 |
| High-Level Stoplight | 1156 |
| Indicator Lights | |
| Rear Window Defogger Switch | 2102 |
| Lighted Rearview Mirrors | 212-2 |
| Cluster (Illumination) | 161 |
| Turn Signal Indicators | 194 |

| | | |
|---|---|---|
| **Engine Crankcase with filter change** | 4.5 quarts | 4.2 L |
| **Automatic Transaxle** | | |
| 3-Speed (3T40): | | |
| Pan Removal and Replacement | 4 quarts | 3.8 L |
| After Complete Overhaul | 7 quarts | 6.6 L |
| 4-Speed with Overdrive (4T60-E): | | |
| Pan Removal and Replacement | 6 quarts | 5.7 L |
| After Complete Overhaul | 8 quarts | 7.6 L |

*When draining or replacing torque converter, more fluid may be needed.*

| | | |
|---|---|---|
| **Cooling System** | | |
| 2.2L L4 (Code 4) | | |
| Radiator and Engine only | 6.06 quarts | 5.73 L |
| Complete System | 8.74 quarts | 8.27 L |
| 3100 V6 (Code M) | | |
| Radiator and Engine only | 9.18 quarts | 8.69 L |
| Complete System | 11.6 quarts | 11.0 L |
| **Refrigerant (R-134a), Air Conditioning** | | |
| 2.2L (Code 4) | 1.75 pounds | 0.08 kg |
| 3100 V6 (Code M) | 2.0 pounds | 0.9 kg |

*Not all air conditioning refrigerants are the same. If the air conditioning system in your vehicle needs refrigerant, be sure the proper refrigerant is used. If you're not sure, ask your Buick dealer. For additional information, see your "Warranty and Owner Assistance Information" booklet.*

| | | |
|---|---|---|
| **Fuel Tank** | 16.5 gallons | 62.4 L |
| **Power Steering** | | |
| Pump Only | | |
| 2.2L L4 (Code 4) | 1 pint | 0.47 L |
| 3100 V6 (Code M) | 1 pint | 0.47 L |
| Complete System | | |
| 2.2L L4 (Code 4) | 1.5 pints | 0.75 L |
| 3100 V6 (Code M) | 1.5 pints | 0.75 L |
| **Tire Pressures, Sizes** | See Tire-Loading Information label on driver's door. | |
| **Wheel Nut Torque** | 100 pound-feet | (140 N•m) |

**NOTE:** All capacities are approximate. When adding, be sure to fill to the appropriate level, as recommended in this manual.

## Engine Specifications

| | 2.2L | 3100 V6 |
|---|---|---|
| VIN Engine Code | 4 | M |
| Type | L4 | V6 |
| Displacement | 2.2 Liters | 3.1 Liters |
| Compression Ratio | 9:1 | 9.5:1 |
| Firing Order | 1-3-4-2 | 1-2-3-4-5-6 |
| Thermostat Temperature | 195°F (91°C) | 195°F (91°C) |

## Vehicle Dimensions

| | Sedan | Wagon |
|---|---|---|
| Wheelbase | 104.9 in. (2664 mm) | 104.9 in (2664 mm) |
| Overall Length | 189.1 in. (4803 mm) | 190.9 in. (4851 mm) |
| Overall Height | 54.2 in. (1377 mm) | 54.2 in. (1377 mm) |
| Overall Width | 69.4 in. (1762 mm) | 69.4 in. (1762 mm) |
| Front Tread | 58.7 in (1492 mm) | 58.7 in. (1492 mm) |
| Rear Tread | 56.7 in. (1442 mm) | 56.7 in. (1442 mm) |

## Normal Maintenance Replacement Parts

**Air Cleaner Element**

2.2L L4 ..... AC Type A-905C

3100 V6 ..... AC Type A-925C

**Engine Oil Filter**

2.2L L4 ..... AC Type PF-47

3100 V6 ..... AC Type PF-47

**PCV Valve**

2.2L L4 ..... AC Type CV-900C

3100 V6 ..... AC Type CV-892C

**Spark Plugs**

2.2L L4 ..... 24574912 Gap: 0.060 inch (1.52 mm)

3100 V6 ..... AC Type •R44LTSM6 Gap: 0.060 inch (1.50 mm)

**Batteries**

Remote Lock Control Transmitter ..... 2016 (2)

## NOTES

# Section 7 Maintenance Schedule

**IMPORTANT:**
**KEEP ENGINE OIL AT THE PROPER LEVEL AND CHANGE AS RECOMMENDED**

This section covers the maintenance required for your Buick. Your vehicle needs these services to retain its safety, dependability and emission control performance.

*Have you purchased the GM Protection Plan? The Plan supplements your new vehicle warranties. See your Buick dealer for details.*

## Introduction

### Your Vehicle and the Environment

Proper vehicle maintenance not only helps to keep your vehicle in good working condition, but also helps the environment. All recommended maintenance procedures are important. Improper vehicle maintenance or the removal of important components can significantly affect the quality of the air we breathe. Improper fluid levels or even the wrong tire inflation can increase the level of emissions from your vehicle. To help protect our environment, and to help keep your vehicle in good condition, please maintain your vehicle properly.

## How This Section is Organized

The remainder of this section is divided into five parts:

**"Part A: Scheduled Maintenance Services"** shows what to have done and how often. Some of these services can be complex, so unless you are technically qualified and have the necessary equipment, you should let your dealer's service department or another qualified service center do these jobs.

> **⚠ CAUTION:**
>
> **Performing maintenance work on a vehicle can be dangerous. In trying to do some jobs, you can be seriously injured. Do your own maintenance work only if you have the required know-how and the proper tools and equipment for the job. If you have any doubt, have a qualified technician do the work.**

If you are skilled enough to do some work on your vehicle, you will probably want to get the service information GM publishes. See "Service Publications" in the Index.

**"Part B: Owner Checks and Services"** tells you what should be checked whenever you stop for fuel. It also explains what you can easily do to help keep your vehicle in good condition.

**"Part C: Periodic Maintenance Inspections"** explains important inspections that your Buick dealer's service department or another qualified service center should perform.

**"Part D: Recommended Fluids and Lubricants"** lists some products GM recommends to help keep your vehicle properly maintained. These products, or their equivalents, should be used whether you do the work yourself or have it done.

**"Part E: Maintenance Record"** provides a place for you to record the maintenance performed on your vehicle. Whenever any maintenance is performed, be sure to write it down in this part. This will help you determine when your next maintenance should be done. In addition, it is a good idea to keep your maintenance receipts. They may be needed to qualify your vehicle for warranty repairs.

# Part A: Scheduled Maintenance Services

## Using Your Maintenance Schedule

We at General Motors want to help you keep your vehicle in good working condition. But we don't know exactly how you'll drive it. You may drive very short distances only a few times a week. Or you may drive long distances all the time in very hot, dusty weather. You may use your vehicle in making deliveries. Or you may drive it to work, to do errands or in many other ways.

Because of all the different ways people use their GM vehicles, maintenance needs vary. You may even need more frequent checks and replacements than you'll find in the schedules in this section. So please read this section and note how you drive. If you have any questions on how to keep your vehicle in good condition, see your Buick dealer.

This part tells you the maintenance services you should have done and when you should schedule them. If you go to your dealer for your service needs, you'll know that GM-trained and supported service people will perform the work using genuine GM parts.

The proper fluids and lubricants to use are listed in Part D. Make sure whoever services your vehicle uses these. All parts should be replaced and all necessary repairs done before you or anyone else drives the vehicle.

These schedules are for vehicles that:

- carry passengers and cargo within recommended limits. You will find these limits on your vehicle's Tire-Loading Information label. See "Loading Your Vehicle" in the Index.
- are driven on reasonable road surfaces within legal driving limits.
- use the recommended unleaded fuel. See "Fuel" in the Index.

## Selecting the Right Schedule

First you'll need to decide which of the two schedules is right for your vehicle. Here's how to decide which schedule to follow:

# Maintenance Schedule

## Schedule I Definition

Follow Maintenance Schedule I if any one of these is true for your vehicle:

- Most trips are less than 5 to 10 miles (8 to 16 km). This is particularly important when outside temperatures are below freezing.
- Most trips include extensive idling (such as frequent driving in stop-and-go traffic).
- Most trips are through dusty areas.
- You frequently tow a trailer or use a carrier on top of your car.
- You frequently tow a trailer or use a carrier on top of your car. (With some models, you should never tow a trailer. See "Towing a Trailer" in the Index.)

Schedule I should also be followed if the vehicle is used for delivery service, police, taxi, or other commercial application.

## Schedule I Intervals

**Every 3,000 Miles (5 000 km) or 3 Months, Whichever Occurs First.**
Engine Oil and Filter Change

## Schedule I Intervals

**Every 6,000 Miles (10 000 km) or 6 months, Whichever Occurs First.**
Chassis Lubrication
**At 6,000 Miles (10 000 km) - Then Every 12,000 Miles (25 000 km)**
Tire Rotation
**Every 15,000 Miles (25 000 km)**
Air Cleaner Filter Inspection, if driving in dusty conditions
**Every 30,000 Miles (50 000 km)**
Air Cleaner Filter Replacement
Spark Plug Replacement (Except 2.2L Code 4 engine)
Spark Plug Wire Inspection
Fuel Tank, Cap and Lines Inspection
Exhaust Gas Recirculation (EGR) System Inspection (2.2L Code 4 engine only)
Engine Accessory Drive Belt Inspection (or every 24 months, whichever occurs first)
Cooling System Service (or every 24 months, whichever occurs first)
**Every 50,000 Miles (83 000 km)**
Automatic Transaxle Service (severe conditions only)
**Every 100,000 Miles (166 000 km)**
Spark Plug Replacement (2.2L Code 4 engine Only)

# Maintenance Schedule

## Schedule II Definition

Follow Schedule II *only* if none of the conditions from Schedule I is true.

## Schedule II Intervals

**Every 7,500 Miles (12 500 km)**

- Engine Oil and Filter Change (or every 12 months, whichever occurs first)
- Chassis Lubrication (or every 12 months, whichever occurs first)

## Schedule II Intervals

**At 7,500 Miles (12 500 km) - Then Every 15,000 Miles (25 000 km)**

- Tire Rotation

**Every 30,000 Miles (50 000 km)**

- Engine Accessory Drive Belt Inspection (or every 24 months, whichever occurs first)
- Cooling System Service (or every 24 months, whichever occurs first)
- Spark Plug Replacement (Except 2.2L Code 4 engine)
- Spark Plug Wire Inspection
- Exhaust Gas Recirculation (EGR) System Inspection (2.2L Code 4 Engine Only)
- Air Cleaner Filter Replacement
- Fuel Tank, Cap and Lines Inspection

**Every 50,000 Miles (83 000 km)**

- Automatic Transaxle Service (severe conditions only)

**Every 100,000 Miles (166 000 km)**

- Spark Plug Replacement (2.2L Code 4 engine only)

# Maintenance Schedule I

The services shown in this schedule up to 100,000 miles (166 000 km) should be performed after 100,000 miles (166 000 km) at the same intervals.

## Footnotes

† The U.S. Environmental Protection Agency or the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of vehicle useful life. We, however, urge that all recommended maintenance services be performed at the indicated intervals and the maintenance be recorded.

## *3,000 Miles (5 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *6,000 Miles (10 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *9,000 Miles (15 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first).
  *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *12,000 Miles (20 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *15,000 Miles (25 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*
- ☐ Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary. *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *18,000 Miles (30 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *21,000 Miles (35 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first).
  *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *24,000 Miles (40 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *27,000 Miles (45 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *30,000 Miles (50 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).
- ☐ Inspect engine accessory drive belt (or every 24 months, whichever occurs first).
- ☐ Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. *An Emission Control Service.*
- ☐ Replace spark plugs (except 2.2L Code 4 engine). *An Emission Control Service.*
- ☐ Inspect spark plug wires. *An Emission Control Service.* †
- ☐ Replace air cleaner filter. Replace filter more often under dusty conditions. *An Emission Control Service.*
- ☐ Inspect Exhaust Gas Recirculation (EGR) system (2.2L Code 4 engine only). *An Emission Control Service.* †
- ☐ Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed. *An Emission Control Service.* †

***(Continued)***

# Maintenance Schedule I

### *30,000 Miles (50 000 km) (Continued)*

☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *33,000 Miles (55 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *36,000 Miles (60 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *39,000 Miles (65 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *42,000 Miles (70 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *45,000 Miles (75 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*
- ☐ Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary. *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *48,000 Miles (80 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *50,000 Miles (83 000 km)*

☐ Change automatic transaxle fluid and filter if the vehicle is mainly driven under one or more of these conditions:

- In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
- In hilly or mountainous terrain.
- When doing frequent trailer towing.
- Uses such as found in taxi, police or delivery service.

*If you do not use your vehicle under any of these conditions, the fluid and filter do not require changing.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *51,000 Miles (85 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *54,000 Miles (90 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *57,000 Miles (95 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *60,000 Miles (100 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

☐ Inspect engine accessory drive belt (or every 24 months, whichever occurs first).

☐ Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap.
*An Emission Control Service.*

***(Continued)***

# Maintenance Schedule I

### *60,000 Miles (100 000 km) (Continued)*

- ☐ Replace spark plugs (except 2.2L Code 4 engine). *An Emission Control Service.*
- ☐ Inspect spark plug wires. *An Emission Control Service.* †
- ☐ Replace air cleaner filter. Replace filter more often under dusty conditions. *An Emission Control Service.*
- ☐ Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed. *An Emission Control Service.*†
- ☐ Inspect Exhaust Gas Recirculation (EGR) system (2.2L Code 4 engine only). *An Emission Control Service.* †

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *63,000 Miles (105 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *66,000 Miles (110 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *69,000 Miles (115 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first).
  *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *72,000 Miles (120 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *75,000 Miles (125 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first). *An Emission Control Service.*
- ☐ Inspect air cleaner filter if you are driving in dusty conditions. Replace filter if necessary. *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule I

## *78,000 Miles (130 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *81,000 Miles (135 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *84,000 Miles (140 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *87,000 Miles (145 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *90,000 Miles (150 000 km)*

- ☐ Change engine oil and filter (or every 3 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).
- ☐ Inspect engine accessory drive belt (or every 24 months, whichever occurs first).
- ☐ Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap.
  *An Emission Control Service.*
- ☐ Replace spark plugs (except 2.2L Code 4 engine). *An Emission Control Service.*
- ☐ Inspect spark plug wires. *An Emission Control Service.* †
- ☐ Replace air cleaner filter. Replace filter more often under dusty conditions.
  *An Emission Control Service.*
- ☐ Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed.
  *An Emission Control Service.* †
- ☐ Inspect Exhaust Gas Recirculation (EGR) system (2.2L Code 4 engine only).
  *An Emission Control Service.* †

***(Continued)***

# Maintenance Schedule I

### *90,000 Miles (150 000 km) (Continued)*

☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *93,000 Miles (155 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *96,000 Miles (160 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 6 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

### *99,000 Miles (165 000 km)*

☐ Change engine oil and filter (or every 3 months, whichever occurs first).
*An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## Maintenance Schedule I

### *100,000 Miles (166 000 km)*

☐ Replace spark plugs (2.2L Code 4 engine only). *An Emission Control Service.*

☐ Change automatic transaxle fluid and filter if the vehicle is mainly driven under one or more of these conditions:

- In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
- In hilly or mountainous terrain.
- When doing frequent trailer towing.
- Uses such as found in taxi, police or delivery service.

*If you do not use your vehicle under any of these conditions, the fluid and filter do not require changing.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

The services shown in this schedule up to 100,000 miles (166 000 km) should be performed after 100,000 miles (166 000 km) at the same intervals.

## Footnotes

† The U.S. Environmental Protection Agency or the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of vehicle useful life. We, however, urge that all recommended maintenance services be performed at the indicated intervals and the maintenance be recorded.

## *7,500 Miles (12 500 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

## *15,000 Miles (25 000 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *22,500 Miles (37 500 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

## *30,000 Miles (50 000 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first). *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Inspect engine accessory drive belt (or every 24 months, whichever occurs first).
- ☐ Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. *An Emission Control Service.*
- ☐ Replace spark plugs (except 2.2L Code 4 engine). *An Emission Control Service.*
- ☐ Inspect spark plug wires. *An Emission Control Service.* †
- ☐ Replace air cleaner filter. *An Emission Control Service.*
- ☐ Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed. *An Emission Control Service.* †
- ☐ Inspect Exhaust Gas Recirculation (EGR) system (2.2L Code 4 engine only). *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

## *37,500 Miles (62 500 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *45,000 Miles (75 000 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

## *50,000 Miles (83 000 km)*

☐ Change automatic transaxle fluid and filter if the vehicle is mainly driven under one or more of these conditions:

- In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
- In hilly or mountainous terrain.
- When doing frequent trailer towing.
- Uses such as found in taxi, police or delivery service.

*If you do not use your vehicle under any of these conditions, the fluid and filter do not require changing.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

## *52,500 Miles (87 500 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *60,000 Miles (100 000 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Inspect engine accessory drive belt (or every 24 months, whichever occurs first).
- ☐ Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap.
  *An Emission Control Service.*

# Maintenance Schedule II

- ☐ Replace spark plugs (except 2.2L Code 4 engine). *An Emission Control Service.*
- ☐ Inspect spark plug wires. *An Emission Control Service.* †
- ☐ Replace air cleaner filter. *An Emission Control Service.*
- ☐ Inspect fuel tank, cap and lines for damage or leaks. Inspect fuel cap gasket for any damage. Replace parts as needed. *An Emission Control Service.* †
- ☐ Inspect Exhaust Gas Recirculation (EGR) system (2.2L Code 4 engine only). *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *67,500 Miles (112 500 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first). *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

## *75,000 Miles (125 000 km)*

☐ Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *82,500 Miles (137 500 km)*

☐ Change engine oil and filter (or every 12 months, whichever occurs first).
*An Emission Control Service.*

☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).

☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Maintenance Schedule II

## *90,000 Miles (150 000 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first). *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Inspect engine accessory drive belt (or every 24 months, whichever occurs first).
- ☐ Drain, flush and refill cooling system (or every 24 months, whichever occurs first). See "Engine Coolant" in the Index for what to use. Inspect hoses. Clean radiator, condenser, pressure cap and neck. Pressure test the cooling system and pressure cap. *An Emission Control Service.*
- ☐ Replace spark plugs (except 2.2L Code 4 engine). *An Emission Control Service.*
- ☐ Inspect spark plug wires. *An Emission Control Service.* †
- ☐ Replace air cleaner filter. *An Emission Control Service.*

***(Continued)***

### *90,000 Miles (150 000 km) (Continued)*

- ☐ Inspect fuel tank, cap and lines. Inspect fuel cap gasket for any damage. Replace parts as needed. *An Emission Control Service.* †
- ☐ Inspect Exhaust Gas Recirculation (EGR) system (2.2L Code 4 engine only).
  *An Emission Control Service.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *97,500 Miles (162 500 km)*

- ☐ Change engine oil and filter (or every 12 months, whichever occurs first).
  *An Emission Control Service.*
- ☐ Lubricate the transaxle shift linkage, parking brake cable guides, underbody contact points and linkage. If equipped with grease fittings, lubricate the suspension and steering linkage (or every 12 months, whichever occurs first).
- ☐ Rotate tires. See "Tire Inspection and Rotation" in the Index for proper rotation pattern and additional information.

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

## *100,000 Miles (166 000 km)*

☐ Replace spark plugs (2.2L Code 4 engine only). *An Emission Control Service.*

☐ Change automatic transaxle fluid and filter if the vehicle is mainly driven under one or more of these conditions:

- In heavy city traffic where the outside temperature regularly reaches 90°F (32°C) or higher.
- In hilly or mountainous terrain.
- When doing frequent trailer towing.
- Uses such as found in taxi, police or delivery service.

*If you do not use your vehicle under any of these conditions, the fluid and filter do not require changing.*

| DATE | ACTUAL MILEAGE | SERVICED BY: |
|---|---|---|
| | | |

# Part B: Owner Checks and Services

Listed below are owner checks and services which should be performed at the intervals specified to help ensure the safety, dependability and emission control performance of your vehicle.

Be sure any necessary repairs are completed at once. Whenever any fluids or lubricants are added to your vehicle, make sure they are the proper ones, as shown in Part D.

## At Each Fuel Fill

*It is important for you or a service station attendant to perform these underhood checks at each fuel fill.*

### Engine Oil Level

Check the engine oil level and add the proper oil if necessary. See "Engine Oil" in the Index for further details.

### Engine Coolant Level

Check the engine coolant level and add the proper coolant mix if necessary. See "Coolant" in the Index for further details.

### Windshield Washer Fluid Level

Check the windshield washer fluid level in the windshield washer tank and add the proper fluid if necessary. See "Windshield Washer Fluid" in the Index for further details.

## At Least Once a Month

### Tire Inflation

Check tire inflation. Make sure tires are inflated to the pressures specified on the Tire-Loading Information label located on the rear edge of the driver's door. See "Tires" in the Index for further details.

### Cassette Deck

Clean cassette deck. Cleaning should be done every 50 hours of tape play. See "Audio Systems" in the Index for further details.

## At Least Once a Year

### Key Lock Cylinders

Lubricate the key lock cylinders with the lubricant specified in Part D.

### Body Lubrication

Lubricate all body door hinges. Also lubricate all hinges and latches, including those for the hood, rear compartment glove box door, and any folding seat hardware. Part D tells you what to use. More frequent lubrication may be required when exposed to a corrosive environment.

### Starter Switch

**⚠ CAUTION:**

**When you are doing this check, the vehicle could move suddenly. If it does, you or others could be injured. Follow the steps below.**

1. Before you start, be sure you have enough room around the vehicle.
2. Firmly apply both the parking brake (see "Parking Brake" in the Index if necessary) and the regular brake.

   NOTE: Do not use the accelerator pedal, and be ready to turn off the engine immediately if it starts.
3. Try to start the engine in each gear. The starter should work only in PARK (P) or NEUTRAL (N). If the starter works in any other position, your vehicle needs service.

### Brake-Transaxle Shift Interlock -- BTSI

**⚠ CAUTION:**

**When you are doing this check, the vehicle could move suddenly. If it does, you or others could be injured. Follow the steps below.**

1. Before you start, be sure you have enough room around the vehicle. It should be parked on a level surface.
2. Firmly apply the parking brake (see "Parking Brake" in the Index if necessary).

   NOTE: Be ready to apply the regular brake immediately if the vehicle begins to move.
3. With the engine off, turn the key to the RUN position, but don't start the engine. Without applying the regular brake, try to move the shift lever out of PARK (P) with normal effort. If the shift lever moves out of PARK (P), your vehicle's BTSI needs service.

### Steering Column Lock

While parked, and with the parking brake set, try to turn the key to LOCK in each shift lever position.

- The key should turn to LOCK only when the shift lever is in PARK (P).
- The key should come out only in LOCK.

### Parking Brake and Automatic Transaxle PARK (P) Mechanism Check

> **⚠ CAUTION:**
>
> **When you are doing this check, your vehicle could begin to move. You or others could be injured and property could be damaged. Make sure there is room in front of your vehicle in case it begins to roll. Be ready to apply the regular brake at once should the vehicle begin to move.**

Park on a fairly steep hill, with the vehicle facing downhill. Keeping your foot on the regular brake, set the parking brake.

- To check the parking brake: With the engine running and transaxle in NEUTRAL (N), slowly remove foot pressure from the regular brake pedal. Do this until the vehicle is held by the parking brake only.
- To check the PARK (P) mechanism's holding ability: Shift to PARK (P). Then release all brakes.

### Underbody Flushing

At least every spring, use plain water to flush any corrosive materials from the underbody. Take care to clean thoroughly any areas where mud and other debris can collect.

# Part C: Periodic Maintenance Inspections

Listed below are inspections and services which should be performed at least twice a year (for instance, each spring and fall). You should let your GM dealer's service department or other qualified service center do these jobs. Make sure any necessary repairs are completed at once.

## Restraint Systems

Now and then, make sure all your belts, buckles, latch plates, retractors, anchorages and reminder systems are working properly. Look for any loose parts or damage. If you see anything that might keep a restraint system from doing its job, have it repaired.

## Steering, Suspension and Front-Wheel-Drive Axle Boot and Seal Inspection

Inspect the front and rear suspension and steering system for damaged, loose or missing parts, signs of wear, or lack of lubrication. Inspect the power steering lines and hoses for proper hookup, binding, leaks, cracks, chafing, etc. Clean and then inspect the drive axle boot seals for damage, tears or leakage. Replace seals if necessary.

## Exhaust System Inspection

Inspect the complete exhaust system. Inspect the body near the exhaust system. Look for broken, damaged, missing or out-of-position parts as well as open seams, holes, loose connections, or other conditions which could cause a heat build-up in the floor pan or could let exhaust fumes into the vehicle. See "Engine Exhaust" in the Index.

## Throttle Linkage Inspection

Inspect the throttle linkage for interference or binding, and for damaged or missing parts. Replace parts as needed. Accelerator and cruise control cables should not be lubricated.

## Brake System Inspection

Inspect the complete system. Inspect brake lines and hoses for proper hookup, binding, leaks, cracks, chafing, etc. Inspect disc brake pads for wear and rotors for surface condition. Also inspect drum brake linings for wear and cracks. Inspect other brake parts, including drums, wheel cylinders, calipers, parking brake, etc. Check parking brake adjustment. You may need to have your brakes inspected more often if your driving habits or conditions result in frequent braking.

## Part D: Recommended Fluids and Lubricants

NOTE: Fluids and lubricants identified below by name, part number or specification may be obtained from your GM dealer.

| USAGE | FLUID/LUBRICANT |
|---|---|
| Engine Oil | Engine oil with the American Petroleum Institute Certified For Gasoline Engines "Starburst" symbol of the proper viscosity. To determine the preferred viscosity for your vehicle's engine, see "Engine Oil" in the Index. |
| Engine Coolant | 50/50 mixture of water (preferably distilled) and good quality ethylene glycol base antifreeze (GM Part No. 1052753 or equivalent) conforming to GM Specification 1825M or approved recycled coolant conforming to GM Specification 1825M. |
| Coolant Supplement | GM Part No. 3634621 or equivalent. |
| Hydraulic Brake System | Delco Supreme 11® Brake Fluid (GM Part No. 1052535 or equivalent DOT-3 brake fluid). |
| Parking Brake Guides | Chassis lubricant (GM Part No. 1052497 or equivalent) or lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB. |
| Power Steering System | GM Hydraulic Power Steering Fluid (GM Part No. 1052884 or equivalent). |
| Automatic Transaxle | DEXRON®-III Automatic Transmission Fluid. |
| Key Lock Cylinders | Lubricate with Multi-Purpose Lubricant (GM Part No. 12345120) or synthetic SAE 5W-30 engine oil. |
| Automatic Transaxle Shift Linkage | Engine oil. |

| USAGE | FLUID/LUBRICANT |
|---|---|
| Chassis Lubrication | Chassis lubricant (GM Part No. 1052497 or equivalent) or lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB. |
| Windshield Washer Solvent | GM Optikleen® Washer Solvent (GM Part No. 1051515) or equivalent. |
| Hood Latch Assembly | |
| a. Pivots and Spring Anchor | a. Engine oil. |
| b. Release Pawl | b. Chassis lubricant (GM Part No. 1052497 or equivalent) or lubricant meeting requirements of NLGI Grade 2, Category LB or GC-LB. |
| Hood and Door Hinges, Station Wagon Liftgate, Fuel Door Hinge, Folding Seat Hardware, Rear Compartment Lid Hinges | Engine oil or Lubriplate Lubricant (GM Part No. 1050109). |
| Weatherstrip Conditioning | Dielectric Silicone Grease (GM Part No. 12345579 or equivalent). |

See "Replacement Parts" in the Index for recommended replacement filters, valves and spark plugs.

## Part E: Maintenance Record

After the scheduled services are performed, record the date, odometer reading and who performed the service in the boxes provided after the maintenance interval. Any additional information from "Owner Checks and Services" or "Periodic Maintenance" can be added on the following record pages. Also, you should retain all maintenance receipts. Your owner information portfolio is a convenient place to store them.

| Maintenance Record | | | |
|---|---|---|---|
| DATE | ODOMETER READING | SERVICED BY | MAINTENANCE PERFORMED |
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# Maintenance Record

| DATE | ODOMETER READING | SERVICED BY | MAINTENANCE PERFORMED |
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# Maintenance Record

| DATE | ODOMETER READING | SERVICED BY | MAINTENANCE PERFORMED |
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# Section 8 Customer Assistance Information

Here you will find out how to contact Buick if you need assistance. This section also tells you how to obtain service publications and how to report any safety defects.

This section includes information on: The Customer Satisfaction Procedure, Customer Assistance for Hearing or Speech Impaired, BBB Auto Line – Alternative Dispute Resolution Program, Reporting Safety Defects, Roadside Assistance, and Service and Owner Publications.

## Customer Satisfaction Procedure

Your satisfaction and goodwill are important to your dealer and Buick. Normally, any concern with the sales transaction or the operation of your vehicle will be resolved by your dealer's Sales or Service Departments. Sometimes, however, despite the best intentions of all concerned, misunderstandings can occur. If your concern has not been resolved to your satisfaction, the following steps should be taken:

**STEP ONE** -- Discuss your concern with a member of dealership management. Normally, concerns can often be quickly resolved at that level. If the matter has already been reviewed with the Sales, Service, or Parts Manager, contact the owner of the dealership or the General Manager.

**STEP TWO** -- If after contacting a member of dealership management, it appears your concern cannot be resolved by the dealership without further help, contact the Buick Customer Assistance Center by calling 1-800-521-7300. In Canada, contact GM of Canada Customer Assistance Center in Oshawa by calling 1-800-263-3777 (English) or 1-800-263-7854 (French).

In Mexico, call (525) 254-3777. In Puerto Rico, call 1-800-496-9992 (English) or 1-800-496-9993 (Spanish). In the U.S. Virgin Islands, call 1-800-496-9994. In all other overseas locations, contact GM North American Export Sales in Canada by calling 1-905-644-4112.

For prompt assistance, please have the following information available to give the Customer Assistance Representative:

- Your name, address, home and business telephone numbers
- Vehicle Identification Number (This is available from the vehicle registration or title, or the plate at the left top of the instrument panel and visible through the windshield.)
- Dealership name and location
- Vehicle delivery date and present mileage
- Nature of concern

We encourage you to call the toll-free number listed previously in order to give your inquiry prompt attention. However, if you wish to write Buick, write to:

Buick Motor Division
Customer Assistance Center
902 E. Hamilton Avenue
Flint, MI 48550

Refer to your Warranty and Owner Assistance Information booklet for addresses of Canadian and GM Overseas offices.

When contacting Buick, please remember that your concern will likely be resolved in the dealership, using the dealership's facilities, equipment and personnel. That is why we suggest you follow Step One first if you have a concern.

## Customer Assistance for the Hearing or Speech Impaired (TDD)

To assist customers who have hearing difficulties, Buick has installed special TDD (Telecommunication Devices for the Deaf) equipment at its Customer Assistance Center. Any hearing or speech impaired customer who has access to a TDD or a conventional teletypewriter (TTY) can communicate with Buick by dialing: 1-800-TD-BUICK. (TDD users in Canada can dial 1-800-263-3830.)

## GM Participation in BBB AUTO LINE - Alternative Dispute Resolution Program*

*This program may not be available in all states, depending on state law. Canadian owners refer to your Warranty and Owner Assistance Information booklet. General Motors reserves the right to change eligibility limitations and/or to discontinue its participation in this program.

Both Buick and your Buick dealer are committed to making sure you are completely satisfied with your new vehicle. Our experience has shown that, if a situation arises where you feel your concern has not been adequately addressed, the Customer Satisfaction Procedure described earlier in this section is very successful.

There may be instances where an impartial third-party can assist in arriving at a solution to a disagreement regarding vehicle repairs or interpretation of the New Vehicle Limited Warranty. To assist in resolving these disagreements Buick voluntarily participates in BBB AUTO LINE.

BBB AUTO LINE is an out-of-court program administered by the Better Business Bureau system to settle disputes between customers and automobile manufacturers. This program is available free of charge to customers who currently own or lease a GM vehicle.

If you are not satisfied after following the Customer Satisfaction Procedure, you may contact the BBB using the toll-free telephone number, or write them at the following address:

BBB AUTO LINE
Council of Better Business Bureaus
4200 Wilson Boulevard
Suite 800
Arlington, VA 22203
Telephone: 1-800-955-5100

To file a claim, you will be asked to provide your name and address, your Vehicle Identification Number (VIN), and a statement of the nature of your complaint. Eligibility is limited by vehicle age and mileage, and other factors.

We prefer you utilize the Customer Satisfaction Procedure before you resort to AUTO LINE, but you may contact the BBB at any time. The BBB will attempt to resolve the complaint serving as an intermediary between you and Buick. If this mediation is unsuccessful, an informal hearing will be scheduled where eligible customers may present their case to an impartial third-party arbitrator.

The arbitrator will make a decision which you may accept or reject. If you accept the decision, GM will be bound by that decision. The entire dispute resolution procedure should ordinarily take about forty days from the time you file a claim until a decision is made.

Some state laws may require you to use this program before filing a claim with a state-run arbitration program or in the courts. For further information, contact the BBB at 1-800-955-5100 or the Buick Customer Assistance Center at 1-800-521-7300.

## REPORTING SAFETY DEFECTS TO THE UNITED STATES GOVERNMENT

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA), in addition to notifying General Motors.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or General Motors.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in the Washington, D.C. area) or write to:

NHTSA, U.S. Department of Transportation
Washington, D.C. 20590

You can also obtain other information about motor vehicle safety from the Hotline.

## REPORTING SAFETY DEFECTS TO THE CANADIAN GOVERNMENT

If you live in Canada, and you believe that your vehicle has a safety defect, you should immediately notify Transport Canada, in addition to notifying General Motors of Canada Limited. You may write to:

Transport Canada
Box 8880
Ottawa, Ontario K1G 3J2

## REPORTING SAFETY DEFECTS TO GENERAL MOTORS

In addition to notifying NHTSA (or Transport Canada) in a situation like this, we certainly hope you'll notify us. Please call us at 1-800-521-7300, or write:

Buick Motor Division
Customer Assistance Center
902 E. Hamilton Avenue
Flint, MI 48550

In Canada, please call us at 1-800-263-3777 (English) or 1-800-263-7854 (French). Or, write:

General Motors of Canada Limited
Customer Assistance Center
1908 Colonel Sam Drive
Oshawa, Ontario L1H 8P7

## Courtesy Transportation

To Buick Motor Division, quality means service -- and service means "keeping you on the road."

Included with your 1995 Buick new car warranty, (36 months, or 36,000 miles), is Courtesy Transportation, a program which will provide Buick retail customers with:

- Reimbursement toward a loaner vehicle, courtesy of Buick Motor Division, for up to five days for vehicles requiring overnight warranty repairs. Also, reimbursement up to $30 a day (five days maximum) may be available for the cost of a rental car, bus or even a cab.
- A free one-way shuttle ride up to 10 miles from the dealership is available for customers whose vehicles require same-day warranty repairs.

Courtesy Transportation is Buick's way of extending the Premium Service you've come to expect for Buick and it's 3,000 dealers. Please review the Courtesy Transportation glove box card contained in your vehicle, or consult your Buick dealer for details.

**In Canada,** please consult your GM dealer for information on Courtesy Transportation.

## Roadside Assistance

Buick Motor Division is proud to offer Buick Roadside Assistance to customers for vehicles covered under the 36 month/36,000 mile new car warranty (whichever comes first).

Our commitment to Buick owners has always included superior service through our network of 3,000 Buick dealers. Buick Roadside Assistance provides an extra measure of convenience and security.

Buick Roadside Assistance:

- Provides owners with access to minor repairs or towing for disabled vehicles.
- Takes the anxiety out of uncertain situations by providing easy access to service professionals trained to work with Buick owners, 24 hours a day, 365 days a year, including weekends and holidays.

For details of Buick Roadside Assistance, please consult your Buick Roadside Assistance owner booklet included with your owner's manual. For needed assistance, call the Buick Roadside Assistance toll-free hotline: 1-800-252-1112.

## Canada Roadside Assistance

Vehicles purchased in Canada have an extensive Roadside Assistance program accessible from anywhere in Canada or the United States. Please refer to the separate brochure provided by the dealer or call 1-800-268-6800 for emergency services.

## Service and Owner Publications

Service manuals, service bulletins, owner's manuals and other service literature are available for purchase for all current and many past model General Motors vehicles.

Toll-free telephone numbers for ordering information:

| | |
|---|---|
| U. S. | 1-800-551-4123 |
| Canada | 1-800-668-5539 |

### Service Manuals

Service manuals contain diagnosis and repair information for all chassis and body systems. They may be useful for owners who wish to get a greater understanding of their vehicle. They are also useful for owners with the appropriate skill level or training who wish to perform "do-it-yourself" service. These are authentic General Motors service manuals meant for professional, qualified technicians.

### Service Bulletins

Service bulletins covering various subjects are regularly sent to all General Motors dealerships/retail facilities. GM monitors product performance in the field. When service methods are found which promote better service on GM vehicles, bulletins are created to help the technician perform better service. Service bulletins may involve any number of vehicles. Some will describe inexpensive service, others will describe expensive service. Some will advise new or unexpected conditions, and others may help avoid future costly repairs. An important reminder ... service bulletins are meant for qualified technicians. Since these bulletins are issued throughout the model year and beyond, an index is required and published quarterly to help identify specific bulletins. Subscriptions are available. You can order an index at the toll-free numbers listed previously, or ask a GM dealer/retailer to see an index or individual bulletin.

### Owner Publications

Owner's manuals, warranty folders and various owner assistance booklets provide owners with general operation and maintenance information.

# Section 9 Index


Adding
- Automatic Transaxle Fluid ..... 6-17
- Brake Fluid ..... 6-24
- Electrical Equipment ..... 2-15, 6-47
- Engine Coolant ..... 6-19
- Engine Oil ..... 6-9
- Power Steering Fluid ..... 6-21
- Sound Equipment ..... 3-13
- Windshield Washer Fluid ..... 2-31, 6-22

Air Bag ..... 1-21
- How Does It Restrain ..... 1-22
- How It Works ..... 1-21
- Location ..... 1-22
- Servicing ..... 1-23
- What Makes It Inflate ..... 1-22
- What Will You See After It Inflates ..... 1-22
- When Should It Inflate ..... 1-21

Air Bag Readiness Light ..... 1-20, 2-50
Air Bag System ..... 1-21
Air Cleaner ..... 6-11
Air Conditioning ..... 3-1
Alignment and Balance, Tires ..... 6-37
Aluminum Wheels, Cleaning ..... 6-44
AM ..... 3-13
Antenna, Fixed Mast ..... 3-15
Antenna, Power Mast Care ..... 3-15
Antifreeze ..... 6-18
- Adding ..... 6-19
- Checking ..... 6-19

Anti-Lock ..... 4-6
Anti-Lock Brake System Active Light ..... 2-53, 4-6
Anti-Lock Brake System Warning Light ..... 2-52, 4-6
Anti-Lock Brakes ..... 4-6
Appearance Care ..... 6-39
Appearance Care and Materials ..... 6-46
Armrest, Storage ..... 2-45
Ashtrays ..... 2-46
Ashtrays, Rear ..... 2-47
Audio Systems ..... 3-4
Automatic Door Locks ..... 2-4
Automatic Transaxle ..... 2-17
- Automatic Overdrive Position ..... 2-18
- Drive (D) Position ..... 2-14
- First (1) Position ..... 2-19
- Neutral (N) Position ..... 2-18
- Park (P) Position ..... 2-17
- Reverse (R) Position ..... 2-17
- Second (2) Position ..... 2-19
- Shifting ..... 2-17
- Starting Your Engine ..... 2-17

Automatic Transaxle Fluid . . . . . 6-14
Adding . . . . . 6-17
Checking . . . . . 6-14

Battery . . . . . 6-25
Battery Light . . . . . 2-56
Battery Replacement, Remote Lock Control . . . . . 2-6
Battery, Warnings . . . . . 5-2, 5-4
Battery, Low Maintenance . . . . . 6-25
BBB Auto Line . . . . . 8-3
Blizzard . . . . . 4-24
Brake Adjustment . . . . . 6-25
Brake Fluid, Adding . . . . . 6-24
Brake Master Cylinder . . . . . 6-23
Brake Pedal Travel . . . . . 6-25
Brake System Parts, Replacing . . . . . 6-25
Brake System Warning Light . . . . . 2-51
Brake Transaxle Shift Interlock . . . . . 7-40
Brake Wear . . . . . 6-24
Brake, Parking . . . . . 2-20
Brakes, Anti-Lock . . . . . 4-6
Brakes, Trailer . . . . . 4-31
Braking . . . . . 4-5
Braking, In Emergencies . . . . . 4-8
Break-In, New Vehicle . . . . . 2-12
BTSI (Brake Transaxle Shift Interlock) . . . . . 7-39
Buick Heritage . . . . . iii
Bulb Replacement . . . . . 6-51
Sidemarker . . . . . 6-28
Front Turn Signal . . . . . 6-28
Headlamps . . . . . 6-27
Parking . . . . . 6-28
Taillamps . . . . . 6-30

Canada, Vehicles First Sold In . . . . . 1-13
Canadian Roadside Assistance . . . . . 8-7
Capacities and Specifications . . . . . 6-52
Carbon Monoxide . . . . . 2-24, 4-25, 4-31
Cassette Tape Player, Care of . . . . . 3-9
Cassette Tape, To Play . . . . . 3-7
Center Passenger Position . . . . . 1-26
Certification/Tire Label . . . . . 4-26
Chains, Safety . . . . . 4-31
Chains, Tire . . . . . 6-38
Changing a Flat Tire . . . . . 5-25
Checking Your Restraint Systems . . . . . 1-46
Checking
Automatic Transaxle Fluid . . . . . 6-14
Brake Fluid . . . . . 6-23
Engine Coolant . . . . . 6-19
Engine Oil . . . . . 6-7
Power Steering Fluid . . . . . 6-20
Restraint Systems . . . . . 1-46
Things Under the Hood . . . . . 6-6
Chemical Paint Spotting . . . . . 6-45
Child Restraints . . . . . 1-32
Securing in a Center Seat Position . . . . . 1-37
Securing in a Rear Outside Seat Position . . . . . 1-33
Securing in the Right Front Seat Position . . . . . 1-39
Top Strap . . . . . 1-32
Where to Put . . . . . 1-32
Cigarette Lighter . . . . . 2-47
Cleaner, Air . . . . . 6-11
Cleaning
Aluminum Wheels . . . . . 6-44
Fabric . . . . . 6-40
Glass . . . . . 6-42
Leather . . . . . 6-42

Outside of the Windshield and Wiper Blades ..... 6-43
Special Problems ..... 6-41
Stains ..... 6-41
The Inside of Your Buick ..... 6-39
The Outside of Your Buick ..... 6-43
Tires ..... 6-45
Top of the Instrument Panel ..... 6-42
Vinyl ..... 6-41
Clock, Setting the ..... 3-4
Comfort Controls ..... 3-1
Compact Spare Tire ..... 5-35
Control of a Vehicle ..... 4-5
Control, Loss of ..... 4-12
Convenience Net ..... 2-42
Convex Outside Mirror ..... 2-41
Coolant ..... 6-18
Coolant Heater, Engine ..... 2-16, 6-11
Coolant Recovery Tank ..... 5-17
Coolant, How to Add to the Coolant Recovery Tank ... 5-17
Coolant, How to Add to the Radiator ..... 5-20
Cooling System, 2.2 Liter Engine ..... 5-14
Cooling System, V6 Engine ..... 5-15
Courtesy Lamps ..... 2-39
Courtesy Transportation ..... 8-5
Cruise Control ..... 2-32
Erasing Speed Memory ..... 2-35
Getting Out of ..... 2-35
Passing Another Vehicle While Using ..... 2-35
To Increase Speed ..... 2-34
To Reduce Speed ..... 2-35
To Resume a Set Speed ..... 2-34
To Set ..... 2-33
Use on Hills ..... 2-35
Customer Assistance for the Hearing or Speech Impaired 8-2
Customer Assistance Information ..... 8-1
Customer Satisfaction Procedure ..... 8-1

**D**amage, Finish ..... 6-45
Damage, Sheet Metal ..... 6-45
Daytime Running Lamps ..... 2-37
Dead Battery ..... 5-2
Defects, Safety ..... 8-4
Defensive Driving ..... 4-1
Defogger, Rear Window ..... 3-3
Defogging ..... 3-2
Defrosting ..... 3-2
Door Locks ..... 2-3
Driver Position ..... 1-13
Driving on Grades ..... 4-33
Driving
At Night ..... 4-13
City ..... 4-17
Defensive ..... 4-1
Drunken ..... 4-2
Freeway ..... 4-18
In a Blizzard ..... 4-24
In Foreign Countries ..... 6-4
In the Rain ..... 4-15
On Curves ..... 4-8
On Hill and Mountain Roads ..... 4-21
On Snow and Ice ..... 4-23
Through Deep Standing Water ..... 2-15
Winter ..... 4-22
With a Trailer ..... 4-32
Drunken Driving ..... 4-2

Electrical Equipment, Adding ..... 2-15, 6-47
Engine Coolant ..... 6-18
Adding ..... 6-19
Checking ..... 6-19
Engine Coolant Heater ..... 2-16, 6-11
Engine Coolant Temperature Warning Light ..... 2-53
Engine Exhaust ..... 2-24
Engine Identification ..... 6-47
Engine Oil ..... 6-7
Adding ..... 6-9
Additives ..... 6-10
Checking ..... 6-7
What Kind to Use ..... 6-9
What to Do with Used Oil ..... 6-11
When to Change ..... 6-11
Engine Overheating ..... 5-13
Engine Specifications ..... 6-54
Engine, Running It While You're Parked ..... 2-25
Engine, Starting ..... 2-14
Ethanol (In Fuel) ..... 6-3
Exhaust, Engine ..... 2-24
Expectant Mothers, Use of Safety Belts ..... 1-25
Extender, Safety Belt ..... 1-46

Fabric Cleaning ..... 6-40
Filling Your Tank ..... 6-4
Filter
Air Cleaner ..... 6-12
Engine Oil ..... 6-11
Finish Care ..... 6-44
Finish Damage ..... 6-45
First Gear, Automatic Transaxle ..... 2-19
Fixed Mast Antenna ..... 3-10
Flashers, Hazard Warning ..... 5-1
Flat Tire, Changing ..... 5-25
FM Stereo ..... 3-13
Folding Rear Seats ..... 1-5
Folding Third Seat ..... 6-4
Foreign Countries, Fuel ..... 6-4
French Language Manual ..... ii
Front Reading Lamps ..... 2-38
Front Towing Hookups ..... 5-9
Front Turn Signal Lamps, Replacement ..... 6-28
Fuel ..... 6-2
Fuel Gage ..... 2-57
Fuel, Filling Your Tank ..... 6-4
Fuel, In Foreign Countries ..... 6-4
Fuse Panel, Glove Box ..... 6-48
Fuses and Circuit Breakers ..... 6-48

Gage, Fuel ..... 2-57
Gasolines for Cleaner Air ..... 6-3
GAWR (Gross Axle Weight Rating) ..... 4-27
Gear Positions ..... 2-17
Glass, Cleaning ..... 6-42
Glove Box ..... 2-11
GVWR (Gross Vehicle Weight Rating) ..... 4-27

Halogen Bulbs ..... 6-26
Hazard Warning Flashers ..... 5-1
Head Restraints ..... 1-3
Headlamp High-Low Beam Changer ..... 2-29
Headlamp On Warning ..... 2-36
Headlamp, Wiring ..... 6-50
Headlamps ..... 2-36

Headlamps, Bulb Replacement ..... 6-26
Hearing or Speech Impaired, Customer Assistance ..... 8-2
Heating ..... 3-2
Highway Hypnosis ..... 4-20
Hill and Mountain Roads ..... 4-21
Hitches, Trailer ..... 4-31
Hood Release ..... 6-6
Horn ..... 2-27
Hydroplaning ..... 4-16
If You're Stuck: In Sand, Mud, Ice or Snow ..... 5-36
Ignition Key Positions ..... 2-13
Ignition Switch ..... 2-13
Inside Mirror ..... 2-40
Inspections
- Brake System ..... 7-41
- Exhaust Systems ..... 7-41
- Restraint Systems ..... 7-41
- Steering, Suspension and Front Wheel Drive Axle Boot and Seal ..... 7-41
- Throttle Linkage ..... 7-41

Instrument Panel ..... 2-48
Instrument Panel Cluster ..... 2-48
Instrument Panel Cluster, Canadian ..... 2-48
Instrument Panel Cluster, Domestic ..... 2-48
Instrument Panel, Cleaning ..... 6-42
Interior Lamp Delay ..... 2-39
Interior/Instrument Panel Lamps ..... 2-36

Jack, Tire ..... 5-26
Jump Starting ..... 5-2

Key Lock Cylinders ..... 7-39
Keys ..... 2-1

Lamp, Malfunction Indicator ..... 2-54
Lamp, Underhood ..... 6-7
Lamps ..... 2-36
Lamps, Courtesy ..... 2-39
Lamps, Daytime Running ..... 2-37
Lamps, Front Reading ..... 2-38
Lamps, Interior Delay ..... 2-39
Lamps, Map ..... 2-37
Lamps, Mirror Reading ..... 2-38
Lamps, Rear Reading ..... 2-39
Lane Change Indicator ..... 2-28
Larger Children, Safety Belt Use ..... 1-43
Leaving Your Vehicle ..... 2-4
Leaving Your Vehicle With the Engine Running ..... 2-22
Liftgate Lock ..... 2-8
Liftgate, Operation Wagon ..... 2-8
Lights
- Air Bag Readiness ..... 1-21, 2-50
- Anti-Lock Brake System ..... 2-53
- Anti-Lock Brake System Warning ..... 2-52, 4-6
- Battery ..... 2-56
- Brake System Warning ..... 2-51
- Engine Coolant Temperature Warning ..... 2-53
- Oil Pressure ..... 2-55
- Liftgate Ajar Warning Light ..... 2-62
- Safety Belt Warning ..... 1-8, 2-49

Lighter ..... 2-47
Loading Your Vehicle ..... 4-26

Locks
Automatic Door ... 2-4
Door ... 2-3
Liftgate ... 2-8
Power Door ... 2-4
Steering Column ... 7-41
Torque ... 2-23
Trunk ... 2-8
Long Trip, Before Leaving on a ... 4-19
Loss of Control ... 4-12
Low Maintenance Battery ... 6-25
Lubrication, Body ... 7-40
Luggage Carrier ... 2-44

Maintenance Record ... 7-44
Maintenance Schedule ... 7-1
Owner Checks and Services ... 7-38
Periodic Maintenance Inspections ... 7-41
Recommended Fluids and Lubricants ... 7-42
Schedule I ... 7-6
Schedule I Definition ... 7-4
Schedule II ... 7-27
Schedule II Definition ... 7-5
Scheduled Maintenance Services ... 7-3
Maintenance, Normal Replacement Parts ... 6-55
Maintenance, Underbody ... 6-45
Maintenance, When Trailer Towing ... 4-34
Malfunction Indicator Lamp (Service Engine Soon Light) 2-54
Manual Front Seat ... 1-1
Manual Outside Mirror ... 2-40
Map Lamp ... 2-37
Methanol (In Fuel) ... 6-3
Mirrors ... 2-40
Reading Lamps ... 2-38
Convex Outside ... 2-41
Inside ... 2-40
Inside Day/Night Rearview ... 2-39
Power ... 2-41
Manual Outside ... 2-40
Outside ... 2-40
Visor Vanity ... 2-45
MTBE (In Fuel) ... 6-3

Net, Convenience ... 2-42
Neutral (N) Position, Automatic Transaxle ... 2-18
New Vehicle "Break-In" ... 2-12
Night Vision ... 4-14

Odometer ... 2-48
Odometer, Tamper Resistant ... 2-48
Odometer, Trip ... 2-49
Off-Road Recovery ... 4-10
Oil Pressure Light ... 2-55
Oil, Engine ... 6-7
Operation, Wagon Liftgate ... 2-8
Ordering
Owner Publications ... 8-6
Service and Owner Publications ... 8-6
Service Bulletins ... 8-6
Service Manuals ... 8-6
Outside Mirrors ... 2-40
Overdrive Position, Automatic Transaxle ... 2-18
Overheated Engine ... 5-13

Owner Checks and Services . . . . . 7-38
Owner Publications, Ordering . . . . . 8-6

Paint Spotting, Chemical . . . . . 6-45
Park (P) Position, Automatic Transaxle . . . . . 2-17
Park (P) Position, Shifting Into . . . . . 2-21
Park (P) Position, Shifting Out of . . . . . 2-23
Parking At Night . . . . . 2-12
Parking Brake . . . . . 2-20
Parking Bulb Replacement . . . . . 6-28
Parking Lots . . . . . 2-12
Parking On Hills While Towing a Trailer . . . . . 4-34
Parking, Over Things That Burn . . . . . 2-24
Passing . . . . . 4-11
Periodic Maintenance Inspections . . . . . 7-42
Power Mirrors . . . . . 2-41
Power Antenna Mast Care . . . . . 3-10
Power Door Locks . . . . . 2-4
Power Seat . . . . . 1-2
Power Seat, Adjusting . . . . . 1-2
Power Steering . . . . . 4-8
Power Steering Fluid . . . . . 6-20
  Adding . . . . . 6-21
  Checking . . . . . 6-20
Power Windows . . . . . 2-25
Power Windows and Other Power Options . . . . . 6-50
Pregnancy, Use of Safety Belts . . . . . 1-25
Problems on the Road . . . . . 5-1
Publications, Service and Owner . . . . . 8-6

Radiator . . . . . 3-11
Radiator Pressure Cap . . . . . 6-20
Radio Reception, Understanding . . . . . 3-18
Radios
  AM/FM Stereo . . . . . 3-4
  AM/FM Stereo Radios with Cassette . . . . . 3-6
  AM/FM Stereo Radios with Cassette Tape Player . . . . 3-6
Rain, Driving In . . . . . 4-15
Rear Locking Storage Compartment . . . . . 2-46
Rear Reading Lamps . . . . . 2-39
Rear Seat Outside Position . . . . . 1-28
Rear Seat Passengers . . . . . 1-28
Rear Towing Hookups . . . . . 5-11
Rear Window Defogger . . . . . 3-3
Reclining Front Seatbacks . . . . . 1-2
Recommended Fluids and Lubricants . . . . . 7-43
Release, Remote Trunk Lid Lock . . . . . 2-8
Release, Remote LIftgate Lock . . . . . 2-8
Remote Keyless Entry System . . . . . 2-5
Remote Keyless Entry System, Battery Replacement . . . 2-29
Remote Keyless Entry System, Matching Transmitters . . . 2-6
Remote Keyless Entry System, Operation . . . . . 2-6
Reminder, Turn Signal . . . . . 2-29
Replacement Bulbs . . . . . 6-51
Replacement Parts . . . . . 6-55
Replacement, Wheel . . . . . 6-37
Replacing Safety Belts . . . . . 1-46
Replacing Seat and Restraint System Parts After a Crash 1-46
Restraints, Checking Your . . . . . 1-46
Restraints, Child . . . . . 1-33
Restraints, Head . . . . . 1-4
Restraints, Replacing Parts After a Crash . . . . . 1-46
Reverse (R) Position, Automatic Transaxle . . . . . 2-17
Right Front Passenger Position . . . . . 1-25
Roadside Assistance . . . . . 8-5
Roadside Assistance, Canadian . . . . . 8-6

Rocking Your Vehicle ..... 5-37
Roof, Luggage Carrier ..... 2-44
Rotation, Tire ..... 6-33

Safety Belt Extender ..... 1-46
Safety Belt Warning Light ..... 1-8, 2-49
Safety Belts ..... 1-7
  Adults ..... 1-13
  Automatic Lap-Shoulder ..... 1-14
  Care of ..... 6-42
  Center Passenger Position ..... 1-26
  Driver Position ..... 1-12
  Extender ..... 1-46
  How to Wear Properly ..... 1-12
  Incorrect Usage ..... 1-17, 1-44, 1-45
  Lap Belt ..... 1-26
  Lap-Shoulder ..... 1-13, 1-27
  Questions People Ask ..... 1-11
  Rear Seat Outside Passenger Positions ..... 1-27
  Rear Seat Passengers ..... 1-27
  Replacing After a Crash ..... 1-46
  Right Front Passenger Position ..... 1-24
  Third Seat Passenger Position ..... 1-26
  Use by Children ..... 1-30
  Use by Larger Children ..... 1-44
  Use by Smaller Children and Babies ..... 1-30
  Use During Pregnancy ..... 1-24
  Why They Work ..... 1-8
Safety Chains ..... 4-31
Safety Defects
  Reporting to General Motors ..... 8-4
  Reporting to the Canadian Government ..... 8-4
  Reporting to the United States Government ..... 8-4
Safety Warnings and Symbols ..... viii
Scheduled Maintenance Services ..... 7-3
Seat ..... 1-1
  Folding Third ..... 1-5
  Manual Front ..... 1-1
  Power ..... 1-2
  Rear Folding ..... 1-3
  Reclining Front ..... 1-2
  Second Folding ..... 1-4
  Securing a Child Restraint ..... 1-34
Seats and Restraint Systems ..... 1-1
Seats and Seat Controls ..... 1-1
Second Folding Seat ..... 1-4
Second (2) Position, Automatic Transaxle ..... 2-19
Security Cover, Wagon Cargo ..... 2-42
Service ..... 6-1
Service and Appearance Care ..... 6-1
Service and Owner Publications ..... 8-6
Service Bulletins, Ordering ..... 8-6
Service Engine Soon Light ..... 2-54
Service Manuals, Ordering ..... 8-7
Service Parts Identification Label ..... 6-47
Service Publications ..... 8-7
Service Work, Doing Your Own ..... 6-1
Servicing Your Air Bag-Equipped Buick ..... 1-24
Sheet Metal Damage ..... 6-45
Shift Lever, Steering Column ..... 2-21
Shifting Into Park (P) ..... 2-21
Shifting Out of Park (P) ..... 2-23
Shifting, Automatic Transaxle ..... 2-17
Shock Absorbers, Superlift ..... 6-17
Sidemarker Bulb Replacement ..... 6-28
Signaling Turns ..... 2-28
Skidding ..... 4-12

Sound Equipment, Adding . . . . . 3-13
Spare Tire, Compact . . . . . 5-35
Specifications Chart . . . . . 6-52
Speedometer . . . . . 2-48
Stains, Cleaning . . . . . 6-41
Starting Your Engine, Automatic Transaxle . . . . . 2-17
Steam, If Coming From Your Engine . . . . . 5-13
Steering . . . . . 4-8
Steering Column Lock . . . . . 7-40
Steering Column Shift Lever . . . . . 2-21
Steering In Emergencies . . . . . 4-9
Steering Wheel, Tilt . . . . . 2-27
Steering, Power . . . . . 4-8
Steering, Tips . . . . . 4-8
Storage Armrest . . . . . 2-45
Storage Compartment, Locking Rear . . . . . 2-46
Storage, Of Your Vehicle . . . . . 6-26
Stuck, If You Are . . . . . 5-36
Superlift Shock Absorbers . . . . . 6-17
Supplemental Restraint System (SRS) . . . . . 1-20
Symbols, Vehicle . . . . . x

Taillamp, Bulb Replacement . . . . . 6-30
Tamper Resistant Odometer . . . . . 2-48
Tape Player Care . . . . . 3-14
Theft . . . . . 2-11
Thermostat . . . . . 6-20
Third (3) Position, Automatic Transaxle . . . . . 2-18
Third Seat Passenger Position . . . . . 1-26
Tilt Steering Wheel . . . . . 2-27
Time, Setting the . . . . . 3-4
Tire Chains . . . . . 6-38
Tire Inspection and Rotation . . . . . 6-33
Tire Loading . . . . . 4-26
Tires . . . . . 6-32
  Alignment and Balance . . . . . 6-37
  Buying New . . . . . 6-35
  Changing a Flat . . . . . 5-25
  Inflation . . . . . 6-32
  Inspection and Rotation . . . . . 6-33
  Spare, Compact . . . . . 5-35
  Temperature . . . . . 6-36
  Traction . . . . . 6-36
  Treadwear . . . . . 6-36
  Uniform Quality Grading . . . . . 6-35
  Wear Indicators . . . . . 6-34
  Wheel Replacement . . . . . 6-38
  When It's Time for New . . . . . 6-34
To Play a Cassette Tape . . . . . 3-7
To Play a Compact Disc . . . . . 3-9
Top Strap . . . . . 1-33
Torque Lock . . . . . 2-23
Torque, Wheel Nut . . . . . 5-32, 6-53
Towing a Trailer . . . . . 4-28
Towing Your Vehicle . . . . . 5-7
  Front . . . . . 5-9
  Rear . . . . . 5-11
Trailer
  Brakes . . . . . 4-31
  Driving on Grades . . . . . 4-33
  Driving with a . . . . . 4-32
  Hitches . . . . . 4-31
  Maintenance When Towing a . . . . . 4-34
  Parking on Hills . . . . . 4-34
  Safety Chains . . . . . 4-31
  Tongue, Weight of . . . . . 4-30
  Total Weight on Your Vehicle's Tires . . . . . 4-31

Towing a ..... 4-28
Turn Signals ..... 4-33
Weight of ..... 4-30
Transaxle Fluid, Automatic ..... 6-14
Trip Odometer ..... 2-49
Trunk Lock ..... 2-8
Turn Signal and Lane Change Indicator ..... 2-28
Turn Signal Reminder ..... 2-29
Turn Signal/Headlamp Beam Lever ..... 2-26
Turn Signals When Towing a Trailer ..... 4-33
Underbody Maintenance ..... 6-45

Underhood Lamp ..... 6-12

Vehicle Damage Warnings ..... ix
Vehicle Dimensions Chart ..... 6-54
Vehicle Identification Number (VIN) ..... 6-47
Vehicle Loading ..... 4-26
Vehicle Storage ..... 6-26
Vehicle Symbols ..... x
Vehicle, Control of a ..... 4-5
Vehicle, Leaving Your ..... 2-4
Vehicles First Sold in Canada ..... 1-13
Ventilation ..... 3-2
Ventilation System, Flow-Through ..... 3-3
Ventilation Tips ..... 3-3
Vision, Night ..... 4-14
Visor Vanity Mirrors ..... 2-45
Visors Vanity Mirrors, Lighted ..... 2-45

Wagon Cargo Security Cover ..... 2-42
Wagon Operation Liftgate ..... 2-8
Warning Devices ..... 5-2
Warning Flashers, Hazard ..... 5-1
Warning Lights, Gages and Indicators ..... 2-49
Washing Your Vehicle ..... 6-43
Water, Driving Through Deep Standing ..... 2-15
Weatherstrips ..... 6-43
Wheel Nut Torque ..... 5-32, 6-53
Wheel Replacement ..... 6-37
Wheel Replacement, Used ..... 6-38
Windows ..... 2-25
Windows, Wagon Rear Vent ..... 2-26
Windows, Washer/Wiper Wagon Rear ..... 2-31
Windows, Power ..... 2-25
Windshield Washer Fluid ..... 2-20, 6-22
Windshield Washers ..... 2-30
Windshield Wiper, Blade Replacement ..... 6-31
Windshield Wiper, Circuit Breaker ..... 6-50
Windshield Wipers ..... 2-29
Winter, Driving in ..... 4-22
Wiring, Headlamp ..... 6-50
Wrecker Towing ..... 5-7

THIS MANUAL IS PRINTED ON RECYCLED PAPER USING
MINIMUM 50% WASTEPAPER, 10% POST CONSUMER WASTE